AUDIO-FOR-VIDEO • BROADCAST • INTERNET AUDIO • LIVE SOUND • MULTIMEDIA • POST PRODUCTION • RECORDING

AUDIO MEDIA

THE WORLD'S LEADING PROFESSIONAL AUDIO TECHNOLOGY MAGAZINE

2008 Gear OF THE Year

Pinewood's Group Hug

A Production Network

Family Addition

Midas PRO6

Benjamin Button

(A Curious Case)

Top Ten Winter Deals!

Exclusive Reader Offers - Page 24

NewBay Media A NEWBAY MEDIA PUBLICATION

9 770960 747024 10

WORLDWIDE EDITION

ISSUE 217 •DECEMBER 2008 • UK £3.80

SAME GREAT SOUND

NEW IMPROVED PERFORMANCE

GEMINI II

The Gemini II gives an incredibly large detailed and intimate sound reminiscent of the classic valve microphones from decades ago, but with all of the top end you'd normally associate with the best solid state mics on the market.

The all new Gemini II now has a 10dB pad and bass cut, a brand new brushed Aluminium PSU and lower s/n ratio. If you are after something that extra bit special you really must hear this microphone. Prepare to be amazed.

"I love the warmth, fullness, presence and fat sound of the Gemini II"

STEVIE WONDER

The NEW Gemini II now features:

- 10dB Pad
- Bass Cut Switch
- New solid aluminium power supply with lower signal to noise ratio
- New 'True-Lock' locking shockmount

PORTABLE MIC BOOTH £229

'I am incredibly impressed by the seemingly contradictory combination of warmth, crispness and definition that was captured in the tracks by the sE Gemini II and sE Reflection Filter. It was a beautiful, natural sound - we didn't even use any EQ!'

DON WAS

Bob Dylan, The Rolling Stones, Willie Nelson, Bonnie Raitt

Exclusive Worldwide Representative for sE Electronics

0845 • 500 • 2 • 500

www.sonic-distribution.com

SONIC DISTRIBUTION

sE

Sound Engineering

www.seelectronics.com

A VERY MERRY XMAS
FROM SONIC AND WAVES

Offer ends 20th December '08 or until stocks last!
UK ONLY

At least 25% OFF all Waves TDM bundles and TDM Upgrades e.g

GOLD (TDM)

ONLY £999.00 inc. VAT!

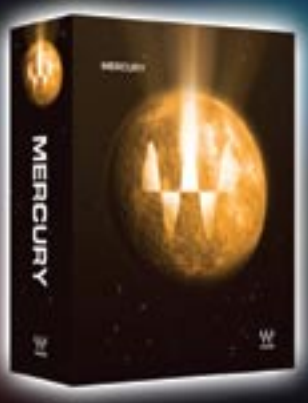
~~RRP: £1874.00~~ inc.VAT

STUDIO CLASSIC COLLECTION (Native)

ONLY £999.00 inc. VAT!

~~RRP: £1522.00~~ inc.VAT

Massive savings on Waves Mercury Bundle (Native)



ONLY £2999.00 inc. VAT!

~~RRP: £5281.00~~ inc.VAT

WAVES

0845 • 500 • 2 • 500
www.sonic-distribution.com
SONIC DISTRIBUTION

contents

ISSUE 217 • DECEMBER 2008

REGULARS

GEO FOCUS: THE WORLD 14

JM EVANS takes a trot around the globe, and finds several reasons to be cheerful this season, despite the general gloom of the market.

WHAT'S UP UK 16

Kevin Hilton sounds out the next ten years of the Northern Ireland Assembly.

FINAL CUT: THE CURIOUS CASE OF BENJAMIN BUTTON 26

STROTHER BULLINS unravels the mystery behind the subtle sounds of Benjamin Button.

VIDEO GUIDE 58

KEVIN HILTON returns for a final look at how integral camera support and ideas of movement have become to the film industry.

AMSR PRODUCT SAMPLER: LINE ARRAYS 68

Line up, line up: *Audio Media* presents a line-up of the best line arrays great and small.

NEWS

RECORDING NEWS 8

Racking up for Olympics, playing guitar in an Overloud way, and Keith McMillen pulls all the right strings.

POST NEWS 10

Germany goes 3D with Constantin, there's work at The Farm in London, and BBC Post Production gets nominated for sound awards.

BROADCAST NEWS 12

A new studio is made in Malibu, while a new OB truck hits the ground (not literally) during the Red Bull Air Festival in Budapest.

AMSR AMSR NEWS 62

Snow Patrol has the Midas Touch, while the Kaiser Chiefs prove the meat of the show, and Pope Benedict has his prayers answered.

RUSHES

TASCAM SS-R1 SS-CDR1 18

ALISTAIR McGHEE considers which is easier: tying a shoelace, or using Tascam's Compact Flash recorder. The shoe loses.

BERLINER U77 20

There need be no comparison, no further competition. DAN WOTHKE has found the nearest-as-perfect mic, and intends to stick with it.

ADAM S2A MONITORS 22

ALISTAIR McGHEE gladly suffers from an acute and repeated dose of NMS (that's 'New Monitor Syndrome, to the yet-to-be-enlightened).

FEATURES

THE PINEWOOD GROUP 28

PAUL MAC finds out more about integration and client happiness within the Pinewood Group.

MADE IN AMERICA 41

Benchmark, McDSP, Telefunken, and Audio Precision are profiled in a behind-the-scenes look at US manufacturers.

SWAG COMPETITION 52

It's Christmas, and SWAG is back; bigger and better than ever before. Enter our easy competition to have sackfuls of SWAG delivered direct to you. What have you got to lose?

NEUMANN TURNS 80 54

STEPHEN BENNETT looks back over the best part of a century in the life of a company that remains innovative and sprightly, despite also being one of the oldest on the block.

AMSR EXTREME REUNITED 70

DAVID MACKENZIE visits Cambridge's Corn Exchange, to experience Extreme's reunion tour and to find the secrets behind the sound.

COVER STORIES

THE PINEWOOD GROUP 28

PAUL MAC finds out more about integration and client happiness within the Pinewood Group

AMSR MIDAS PRO 6 52

Will the PRO6 live up to high expectations? SIMON ALLEN finds out.

REVIEWS

GEAR OF THE YEAR 34

STEPHEN BENNETT sums up the audio gear highlights of 2008, and provides pages of things to ask Santa for. Get your pens and pencils handy…

MOTU DIGITAL PERFORMER 6.0 46

DAVID HELPLING has his mind blown away by the staggering advances in MOTU's DAW, and so decides to let the world know about the secret weapon in his production arsenal.

ZAXCOM FUSION 56

Long has the ENG market been rooted in the practically-Paleolithic days of yore. But in the Fusion, STEVE MURPHY finds a mixer and recorder that may well cause the extinction of other dino-mixers.

AMSR MIDAS PRO6 64

One of the most anticipated audio launches of 2008, but will the PRO6 live up to expectations? SIMON ALLEN finds out.

REVIEW
MOTU DIGITAL PERFORMER 6.0 46

READER COMPETITION
CHRISTMAS SWAG IS BACK! 52

ROUND UP
GEAR OF THE YEAR 34

PROMOTION
TOP TEN WINTER DEALS 24

leader

I was once handed a microphone for repair and was promised a full and accurate description of the fault. I got a single piece of paper with just one word written on it; and I'll leave you to work out which one (it wasn't helpful).

That's a useful image, because in a spectacularly ignorant economic simplification, it would appear from most media coverage that everybody in the entire world is, financially, single-word-to-describe-problem-with-the-microphone…ed.

I'm not an economist. In arguing the finer points of credit markets, inflation, exchange, and so on, I can just about get the better of a sheep. But for what it's worth, the recent trade shows and meetings I've attended could be described as 'economically nonchalant.' It's as if we've been in recession for ten years already, and the difficult financial climate has become background noise despite the squawks of headless chickens up-top. As an industry, we are acting mildly surprised that the rest of the world has only just noticed a problem.

Maybe it's that we've been grappling with financial adversity for so long that we've accepted it as the norm. We've had a lot to deal with. Whether it was the compression of the high technology bubble until it burst all over place – splattering everyone with weapons of mass production; or whether it's the strange duality of warped commune and utter capitalism (dressed in jacket and jeans) that is the Internet (and the DRM, piracy, and deflation complications it brought). Whether it's the splurge of cheap TV with audio budgets to match; or… well… it's a big list. Progress exerts incredible influence over the bottom line, though amazingly, we're still here.

So now we're told: *'it's going to be a bit tricky in the financial department over the next year…'* And? *'We'll have to run faster to stand still…'* Uh-huh… *'There will be casualties – some may not be adequately prepared…'* That's nice dear…

That's business as usual in the media industries. Coping with financial and market strain is something we've become very good at, which means we should be well prepared for whatever gets chucked over the wall next. There will be some who don't make it through unscathed (as always), but there are signs of life around the technology infrastructure and production fields that may help to balance the outlook.

I don't want to be the annoying optimist who, while the group sits amongst the rubble and settles into comfortable misery, pipes up with, "Come on chaps, could be worse!" (in a chirpy tone). Mostly because I don't want to get lynched. I simply want to offer context – a long history of making it work.

I'm not certain what that poor microphone had been through, but in the end I had to concede that the single word was indeed a full and accurate description of the problem. So we went ahead and fixed it anyway (I think I just heard a sheep laugh in a derisive manner). Merry Christmas from all at *AM*.

Paul Mac, Editor

AUDIOMEDIA *is a Sustaining Member of the Audio Engineering Society.*

AUDIOMEDIA

www.audiomedia.com

AUDIO MEDIA (Europe), 1st Floor, 1 Cabot House,
Compass Point Business Park, St Ives, Cambs, PE27 5JL.
Telephone: +44 (0)1480 461555 – Facsimile: +44 (0)1480 461550

General E-mail: mail@audiomedia.com – Press Release E-mail: pr@audiomedia.com

Managing Director
Angela Brown
a.brown@audiomedia.com

Associate Group Publisher
Nick Humbert
n.humbert@audiomedia.com

Editor In Chief
Paul Mac
p.mac@audiomedia.com

News/AMSR Editor
David Mackenzie
d.mackenzie@audiomedia.com

Production Editor
Lanna Marshall
l.marshall@audiomedia.com

Design & Production Manager
John-Paul Shirreffs
jp.shirreffs@audiomedia.com

Regional Sales Manager
Bob Kennedy
bkennedy@imaspub.com
+44 (0)1279 861264

US Sales Manager
Matt Rubenstein
mrubenstein@imaspub.com
+1 914 524 5045

Circulations Manager/ Administration
Jo Perriss
mail@audiomedia.com

Subscriptions
subs@audiomedia.com
UK £43
European (airmail) £60
International (airmail) £72
Payable in Sterling through UK bank

NewBay Media
www.nbmedia.com

The contents of this publication are subject to worldwide copyright protection and reproduction in whole or in part, whether mechanical or electronic, is expressly forbidden without the prior written consent of the Publishers. Great care is taken to ensure accuracy in the preparation of this publication but neither IMAS Publishing (UK) Limited nor the Editor can be held responsible for its contents. The views expressed are those of the contributors and not necessarily those of the Publishers or Editor. The Publishers accept no responsibility for the return of unsolicited manuscripts, photographs, or artwork.

© 2008 IMAS Publishing (UK) Limited. All rights reserved.
*Within Broadcast & Production

TANGO
SmartConsole

The first **Intelligent** Controller in this price range

from the designers of the Smart Console

Smart AV has combined their patented ARC Technology with a huge 22” (16:9) acoustic wave touchscreen to produce the most versatile and intuitive workstation controller yet.

Super-fast Ethernet control of Logic Pro 8, Cubase, Nuendo 4 and Pyramix. Tango offers unique music and post-production features. Interfaces with other work stations will follow soon.

12 fader Extension Bays are available for those who need more than 8 faders.

£3,990

www.smartav.net

£11,870

£7,480

smartav

Tel: +61 2 9648 6744 Fax: +61 2 9648 6766
Email: talktous@smartav.net Website: www.smartav.net

NEW PRODUCT

TL Audio has released the latest addition to its new Ebony Series. The Ebony A4 is a 16:2 summing mixer, housed in a 2U unit. It features 16 balanced inputs on TRS Jack and D-Sub connectors, with individual pan controls for mono or stereo sources. It also boasts the ability to activate a tube stage on the master bus. Once activated, warmth can be adjusted from a dedicated dual triode tube stage.

www.tlaudio.co.uk

NEW PRODUCTS

Blue Microphones has released Mikey and Eyeball; two products that bring the company's style and pro-audio expertise to the consumer market.
Mikey is a device that turns your iPod into a location recorder. It features stereo condenser capsules, and selectable gain settings.
Eyeball is a stylish HD webcam with condenser capsule.
"Previous webcams and recorders were designed like computer peripherals, not specialised consumer electronics," explained Blue's President, Skipper Wise. "We've re-invented these markets with Blue's sense of style and commitment to superior sound."

www.bluemic.com

NEW PRODUCTS

String & Bow

The simple event paradigm of MIDI creates obstacles for players of stringed instruments. Keith McMillen Instruments has announced the release of two innovative products, in an attempt to enable these musicians to take full advantage of computer instruments.
StingPort is a polyphonic string to USB 2.0 converter and software suite, providing guitarists and bowed string players with an alternative to standard MIDI conversion or polyphonic pickups.
"StringPort solves a decades-old conundrum for string players," explained McMillen. "Stringed instruments simply don't fit the simple event model on which MIDI is based, leaving players of some of the most expressive instruments ever created struggling to wring emotion out of the computer musical instruments that have exploded onto the musical scene over the last 25 years."
The product is designed to provide more information than standard MIDI conversion, by analysing the audio signal and extracting the sonic properties of each string in high-resolution.
Also new from McMillen Instruments is the K-Bow. This Bluetooth-enabled, violin sensor bow detects and translates bow technique and movement into control signals to increase expression from synthesisers and audio processors.
The StringPort and K-Bow will be on display at Winter NAMM in the new year.

Keith McMillen Instruments
info@keithmcmillen.com
www.keithmcmillen.com

WORLDWIDE

Ebdon's Recorder

Front of House Engineer Jim Ebdon has designed a compact mobile recording studio for use on Maroon 5's current world tour. Using RME's HDSPe MADIface PCI ExpressCard, he has turned his DiGiCo D5 and Apple Mac PowerBook into a relatively cheap, compact, and powerful workstation.

"I've spent a lot of money on previous tours setting up a Pro Tools system just to archive a show," commented Ebdon. Whilst he acknowledges that $50, 000 is a pretty insignificant sum for a major artist, Ebdon has a clear belief in the benefits of a compact system.
This philosophy is clearly displayed in his FOH booth, which contains only a handful of additional external effects. "I'm a 'less is more' kind of person," Ebdon confesses. "You have to get the source sound right and choose the right microphone, and a good mixing console does the rest… theoretically, I just push the fader up, and it sounds fantastic."

DiGiCo
+44 (0) 1372 845600
www.digico.org

NEW PRODUCT

RØDE has released the M1, a dynamic vocal microphone with internal pop-filter, gold plated XLR connectors, and a lifetime guarantee.

www.rodemic.com

NEW PRODUCT

Genelec has released its Stealth Active Sub woofer. The 5041A features two 6.5-inch low frequency drivers in a slim enclosure.

www.genelec.com

NEW PRODUCT

Audio Ease has released the All In bundle of the company's plug-ins. The bundle comes in two combinations.

www.audi-oease.com

NEW PRODUCT

Waves Audio has released its Dorrough Meter Collection. These meters display sound density by combining average and peak levels.

www.waves.com

NEW PRODUCT

Avlex has announced the Superlux S125, a half-inch diaphragm cardioid condenser microphone, featuring high SPL characteristics and conductive shielding.

www.avlex.com

NEW PRODUCT

Sontronics has launched the Sonora; a two-channel solid-state pre-amp, for studio or portable use.

www.sontronics.com

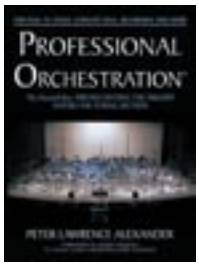
NEW PRODUCT

Over Loud Audio Tools has released TH1, a virtual guitar amp plug-in with the ability to morph between amp models to create custom effects.
Over Loud Audio Tools

www.overloud.com

NEW PRODUCT

Time and Space has released Professional Orchestration; a guide to scoring techniques, endorsed by BioShock soundtrack composer Garry Schyman.



www.timespace.com

LONDON
Alpha Centauri
Alpha Centauri Recording has opened for commercial use. The new Battery Complex SSL mix and recording room boasts an impressive kit-list, featuring an SSL 4060 G+ Console with Total Recall, and a Dynaudio M4+ monitor system installed by Munro Acoustics.
"To install the M4 system we had to modify the speaker wall and customise the cabinets to make them fit," explained Munro Acoustics' Phil Pyatt. "The result looks great as well as sounding incredible."
Other gear housed by the North London studio includes a Pro Tools HD3 with Atomic Clock and Apogee converters, the latest Studer two-inch and half-inch tape machines, a comprehensive microphone collection, and DSD mastering
Alpha Centauri
+44 (0) 20 3138 4025
www.a-centauri.co.uk

LONDON

Olympic Racks

London's Olympic Studios has taken delivery of an Audient Black Series BB4. The Studios are home to top producers Cenzo Townsend and Steven Street, the two of whom have contributed to recordings with New Order, Kaiser Chiefs, Blur, and The Smiths, to name a few.

"The EQs are just fantastic," commented Street. "They sound extremely musical, the perfect complement to the EQs we have on the ASP8024. I prefer the EQ on the Audient console to many other consoles I've worked on, and the unusual quality of the Black EQ helps to achieve something entirely different again."

Olympic has also received a Centro Master Section, which is now rooted in the Studio 3 Prep room, providing source selection between HD rigs and digital output feed for Pro Tools prep files to be fed into the control room.

Townsend recently completed mixing the new Snow Patrol album, *A Hundred Million Suns,* and Street has just embarked on the next Pete Doherty album.

Audient

+44 (0)1256 381944

www.audient.com

TENNESSEE, USA

Nashville-based recording and

post-production facility Paragon Studios has completed numerous ADR sessions with A-list actress Nicole Kidman. The sessions were conducted for the feature film Australia, and required Paragon to link Pro Tools and its SSL C300 Console to a studio in Australia, via the Internet.
To achieve this, Paragon used Source-Connect, a plug-in that allows recording with real-time broadcast quality audio over T1 Cable or DSL Internet.

www.paragon-studios.com

NEW PRODUCT

Marantz launched a new addition to its successful Professional PMD range of solid state recorders at SBES. The PMD661 is a professional handheld PCM/MP3 recorder that supersedes the PMD660, offering an improved form factor, superior feature set, and the use of SD Flash media.

The new model is significantly more compact than its predecessor, necessitating a reduction in the number of buttons and an increase in the use of multi-functional operation.
Further upgrades include an integrated stereo condenser microphone-array for point and shoot recording, and balanced mic and line XLR inputs. The device can record in up to 24-bit/96kHz resolution.

www.d-mpro.eu.com

GERMANY

Constantin Film has begun preparations for Germany's first 3D animation movie. The company installed a DCP 30 S in its Munich screening room, enabling the projection of 2K stereoscopic pictures. However, film projection is not redundant for Constantin; a recently installed film projector is in use as part of a reference cinema.

www.constantin-film.de

LONDON

Soho based TV and film post-production facility, The Farm, has installed Pro-Bel's Morpheus Control and Monitoring solution (MCM) for the unification of monitoring and control systems.

"We are achieving everything we expected to," commented Chief Engineer Jack Edney. "The team at Pro-Bel have been great to work with."

www.farmgroup.tv

NOMINATIVE SOUND

BBC Post Production was nominated for an award in both sound categories at the RTS Craft and Design Awards. The London sound team was nominated in the drama category for its work on BBC One thriller *Criminal Justice*. The Bristol sound team was nominated in the entertainment and non-drama productions category, for its work on BBC Two wildlife show *Natural World, Badgers-Secrets of the Sett*.

The London team designed a disorientating prison soundscape for *Criminal Justice*. As the production budget was limited, they had to give the impression of more prisoners than there were extras on set. To achieve this, Sound Designer Kian Wong created an off-camera narrative, using dialogue recorded on location. "These conversations, which came with natural reverb and acoustics, poked through the main dialogue to provide authenticity," explained Wong.

BBC Post Production
+44 (0) 208 225 7702 (London)
+44 (0) 117 974 6666 (Bristol)
www.bbcresources.com

UK

Megahertz Broadcast Systems has completed the refit of a former Anglia TV studio to create an independent HD studio and post-production facility. The East of England Production Innovation Centre, EPIC, is part of a 1.5 million-pound development. The project included the design and realisation of HD production workflows, and installation of fibre-optic studio infrastructure.

"With all the systems integrators that pitched for the upgrade work, we explained the type of systems that we knew we would need, but left it up to the SIs to shade in the finer details," explained EPIC's Head of Engineering, David Hazel.

EPIC
+44 (0) 1603 727727
www.epic-tv.com

HOLLYWOOD

SonicPool recently provided the mix for *Finding Aloha*; a Surf Cinema documentary film, written and directed by Phil Waller.

www.sonicpool.com

LONDON

Work was recently completed on one of Ascent142's Wardour St suites. The facility offers a new Digidesign console, 5.1 monitoring, and an upgraded Protools HD system.

www.ascent142.co.uk

NEW PRODUCT

Sony has released Acid Pro 7; DAW software with improved MIDI track freeze, tempo curves, beatmapping, and new import/export options.

www.sonycreativesoftware.com

COMPROMISE IS NOT A VIRTUE

APx525 and APx520 two channel audio analyzers, new from Audio Precision, the recognized standard in audio test.

One-click measurements, automated sequences, and the intuitive UI of the award-winning APx Series, with –108 dB typical THD+N and new tests for two channel applications. No other audio analyzer is faster or easier to use.

There's no need to compromise: pricing starts under $10,000 in the US.

Learn more about two channel audio test made easy at **http://ap.com/apx525**

Audio precision®

Diary of Events 2009

January 5-7
ALMA Winter Symposium
Las Vegas, USA

January 8-11
2009 International CES
Las Vegas, USA

January 15-18
NAMM 2009
Anaheim, CA

January 18-21
MIDEM 2009
Cannes, France

February 2-5
CSTB 2009
Moscow, Russia

February 4-7
AFIAL Convention 09
Madrid, Spain

February 11-13
35th AES Conference
London, UK

February 17-19
Broadcast LIVE
Earls Court 2, London

February **23-25**
BES EXPO 2009
New Delhi, India

March 3-5
CabSat 2009
Dubai, UAE

March 3-8
CeBIT 2009
Hannover, Germany

March 4-5
Australian Broadcasting Summit
Sydney, Australia

MALIBU
BERGER BUILDS BU

Former MTV VJ Martha Quinn, and Fuzztone-guitarist husband, Jordan Tarlow, recently completed a new recording studio near their home in Malibu, California. The space was required to handle production needs for Martha's Sirius XM radio show Martha Quinn Presents, and to provide Jordan with a base for his TV commercial and film trailer composition.

The Russ Berger Design Group used a pArtScience SpaceCoupler cloud to overcome the acoustical concerns caused by the existing building's low ceilings. The finished studio, named RadioBu, houses a Digidesign Icon D-Control console along with Tarlow's large collection of vintage instruments and recording equipment.

www.marthaquinnpresents.com

MUNICH
LAWO FLY PACK

Munich based TV production company, SIVision, trialed a new HD OB truck at this year's Budapest Red Bull Air Race. Once the truck was in its working position, up to 20 workplaces were available inside the unit, two of which were in the sound control room, along with a Lawo mc²66.

For Imre Sereg, operating philosophy and system reliability were major factors when choosing the Lawo. "Working with the mc²66 is fast and intuitive," explained Sereg. "The redundant router board in the mc²66 HD core contributes to a high level of reliability that is imperative in live broadcasting."

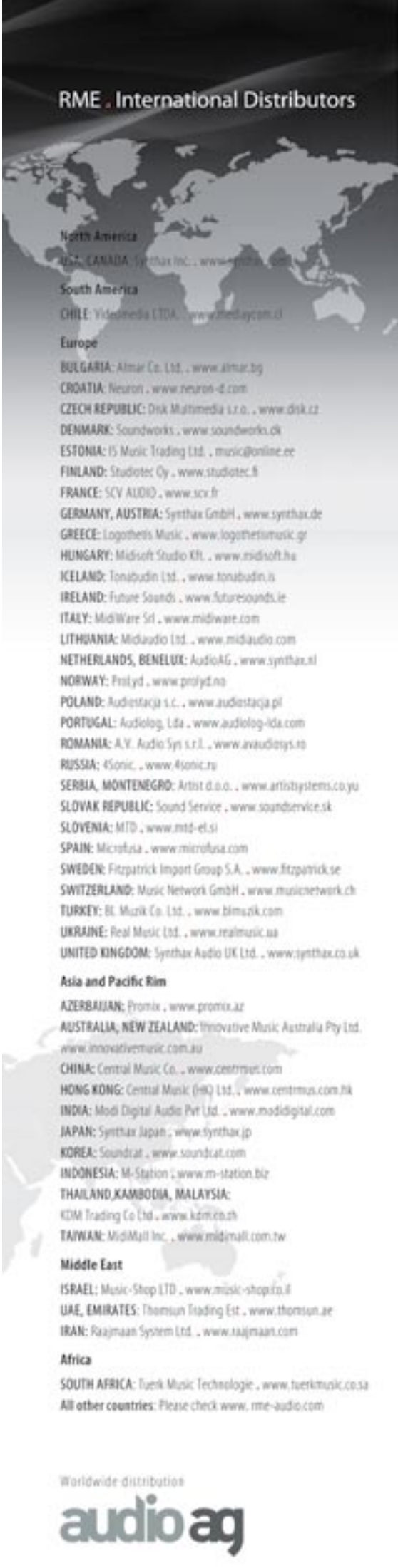
www.lawo.de

HOLLAND
PAAS THE DUTCHY ON 3G SIDE

Tieline Codecs has created a mobile radio studio for Dutch broadcaster René Paas. The service, which is being claimed as the first of its kind, uses a Tieline Commander G3 codec, fitted with a 3G module.

Tieline created the mobile studio for Paas because his work as Chairman of the Netherlands' Christian Trade Union (CNV) requires him to travel extensively. Jos Stuart, Head of Communication for CNV, commented that in the past this often led to missed radio interviews because "he was either stuck in a traffic jam or didn't have an ISDN line at his disposal."

www.tieline.com



PREMIUM LINE

MADI / AES Technology . Made by RME

NEW! HDSPe MADIface

128-Channel MADI ExpressCard for Mobile Computers

1 x MADI I/O . 24 Bit/192 kHz
MIDI over MADI
No external power supply required

HDSPe MADI

128-Channel MADI PCI Express Card

1 x MADI I/O . 24 Bit/192 kHz
Analog Monitor Out . MIDI I/O . Word Clock I/O
Support for Time Code Option

HDSPe AES

32-Channel AES/EBU PCI Express Card

8 x AES/EBU I/O . 24 Bit/192 kHz
2 x MIDI I/O . Word Clock I/O
Support for Time Code Option

MADI. All signals within one optical or coaxial cable.

Only two MADI cables will interface a full 64-channel application in both directions, a stage, studio, theatre or conference hall - lossless - over distances of up to 2000 meters!

Today MADI is an attractive and convenient interface technology, as it provides the simplest method of transmitting audio channels sample-accurate over long distances. The balance between operating distances, installation costs and overall maintenance is exemplary.

RME MADI products combine different audio standards such as AES/EBU, ADAT and TDIF into one MADI audio system. Any MADI installation will remain an open system, easily expandable, using RME devices or products from any other major pro audio brand.

HDSPe MADIface and HDSPe MADI are fully compatible to all devices with MADI interface. Of course they can be used perfectly in combination with RME's own MADI series products, like the high-end MicPreamp Micstasy. With the ADI-648 an 8 x ADAT optical PC interface is realized, unbeatable in price and performance. With the ADI-6432 a bidirectional AES/EBU frontend with 64 channels is set up hassle-free.

www.rme-audio.com
Engineered and manufactured in Germany

UK distribution
Synthax Audio UK Ltd.
www.synthax.co.uk

geo focus: The World

2008 has proved to be a difficult year for the pro audio and recording industries. But there have been some reasons to be cheerful. JIM EVANS makes his selection.

Moscow's NTV Invests In Euphonix

RUSSIA – Euphonix has announced that Russian TV Company, NTV, has installed a 48-fader Euphonix System 5-B mixing console at its Moscow-based broadcast facility.

As one of the country's only private television channels with federal status, NTV earned its reputation for its honest and accurate newscasts. Founded in 1993, today NTV not only reaches 120 million Russian viewers, but also broadcasts to the Commonwealth of Independent States (CIS), Western Europe, parts of Asia, the United States, and Canada. Earlier this year, the station repaired and renovated its infrastructure, re-equipped its station, increased its broadcast signal, and expanded its programming to include feature films, popular talk shows, and regular television series.

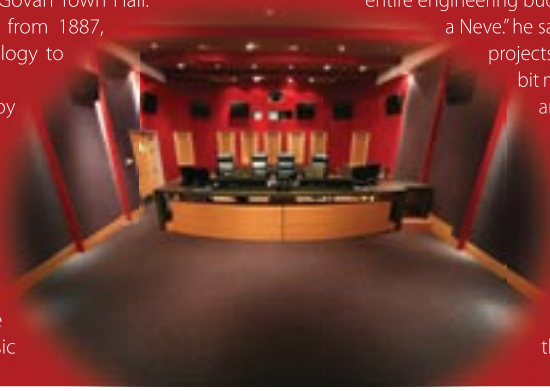
"We consider the Euphonix System 5-B to be the basis for future modernisations of our studios as we transition to fully digital broadcasting," said Lyudmila Anisina, Head of the NTV Broadcasting Department. "Our audio engineers have quickly mastered the Euphonix console, and they look forward to the wide range of possibilities it offers, especially the numerous analogue and digital I/O interfaces, controls and resources."

European First For Savalas

SCOTLAND – Glasgow's Govan district is home to the first Dolby Premier certificated theatre in Europe. This facility, designed by UK-based White Mark, is an integral part of Savalas, Scotland's biggest audio post production facility and whose studio complex is housed within Film City Glasgow, a media production initiative located within the former Govan Town Hall.

Inside this imposing brick building that dates from 1887, there is more than a little 21st century technology to be found.

Savalas was established 10 years ago by composers and film mixers Kahl Henderson, Giles Lamb and Michael Mackinnon. Alongside its Dolby Premier theatre, Savalas has a Foley and ADR stage, two TV dubbing studios, and three sound suites – all designed by White Mark. These are used to provide audio post-production for TV and commercials, a fully supervised audio post and sound design service for feature films, and high-end bespoke music composition by Savalas Music. Savalas moved into Film City Glasgow at the beginning of 2007, having outgrown its previous facilities.



When it came to equipping the new room, Head of Systems and Mixer Sinclair, and the Savalas team worked to a tight budget. "Every single penny was accounted for. Our entire engineering budget for this room probably would not even have bought a Neve," he says. "We had to be clever. Fortunately we did two or three projects over in Main Stream in Copenhagen. Europeans are a little bit more forward thinking when it comes to studio equipment and we learnt a lot from them. They are more inclined towards experimentation. Main Stream's a busy studio reflecting the thriving Danish film industry. They've got two theatres and are always busy, doing about twenty films a year."

Marketing Manager Owen Thomas notes, "Historically, there has been no base for full feature film post in Scotland. Now, the rest of the world can see that Savalas is capable of that scale of work. Clients can come here with confidence

SSL In Hanoi

VIETNAM – Solid State Logic has announced the sale of a C200 HD broadcast audio console to Radio the Voice of Vietnam (VOV). Based in Hanoi, VOV is the State radio broadcaster, and broadcasts six channels of news, cultural programming, and music.

VOV recently built a new radio theatre in Hanoi that is used for a wide range of live-to-air productions and multi-track recording duties, while still being flexible enough to provide – when necessary – post production functions and front-of-house feeds.

The console chosen for the theatre by VOV is a 48-frame version, with 96 in-line channels. It will be supplied with SSL's C-SB remote stage box, which provides 48 24-bit microphone inputs, plus analogue outputs for local monitoring.

SSL's Area Sales Manager for SE Asia and China Anthony Gofton: "'VOV first made contact via our website, which led in turn to a series of meetings and ultimately a highly significant sale."

Sonacom's Xynergi

FRANCE – Post production specialist Sonacom has transformed its facility in Neuilly sur Seine by installing Fairlight Xynergi desktop media creation systems in each of its four High Definition 5.1 surround sound studios. The full service facility, which counts major French broadcasters and advertising agencies among its clients, managed the transformation in less than three days with the help of staff from Fairlight's French distributor, EuroMedia Technologies.

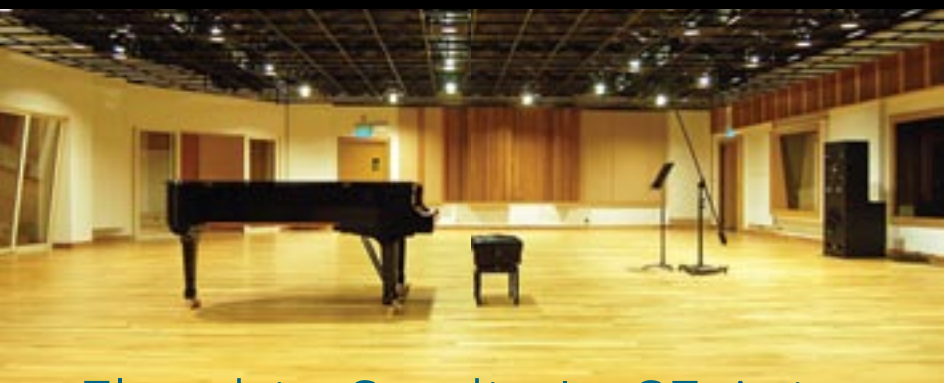
Denis Derigent, Managing Director of EuroMedia Technologies, says: "We started the installation on Friday night and had to have it completed by Monday morning in time for a client booking. Sonacom is one of the first Fairlight customers in the world to completely transfer to Xynergi, and the main challenge we faced was ensuring that the engineers adapted to their new environment in such a short timeframe. It was very tough and very sudden, but they were incredibly motivated."

Berlin Refurb

GERMANY – Home to the Berlin Philharmonic Orchestra, the Berlin Philharmonic Hall (Berlin Philharmonie) is one of the city's cultural icons. Its unique, pentagonally-shaped Great Hall has been praised for its intimate ambience and stellar acoustics. It now boasts a new Meyer Sound system.

"In a concert hall of this calibre... there are limitations on what can be done in terms of sound reproduction," says Klaus-Peter Groß, the hall's Audio Engineer.

Provided by Berlin-based Werner Audi, the system is a multi-faceted design that creates natural imaging localising two sound sources. A centre array of 12 M1D ultra-compact curvilinear array loudspeakers is augmented by five UPJunior ultracompact Vario loudspeakers, which provide the source point imaging. A second array of five M1D loudspeakers is positioned above the choir position at the rear of the stage, with three arrays of two UPJ-1P compact Vario loudspeakers. Each M1D array is equipped with a customised grille built by Werner.



Flagship Studio In SE Asia

SINGAPORE – At the Yong Siew Toh Conservatory of Music at the National University of Singapore (NUS) the stunning facilities now include a fully-fledged recording studio, detail-designed by UK based Eastlake Audio to meet an exacting brief and equipped to the highest professional standards, and which is fairly described as one of the most advanced recording studios in South East Asia. Indeed, the most demanding of engineers and producers would place the facilities in the premier division of any world studio league.

The studio's prime purpose is to record the work of the students, of which there are around 200 enrolled at any one time and all on four-year degree courses. When time allows, it will undertake commercial work. It will also be a 'classroom' for the practical elements of a new sonic arts course to be launched in 2009.

A joint collaboration between the National University of Singapore and one of the world's leading music schools, the Peabody Institute of the Johns Hopkins University in Baltimore, USA, the Conservatory is working closely on programme and facilities development with the Peabody faculty.

Dubai Studio Makeover

UAE – Dubai's Funoon Al Emarat which opened for business in 1993, was the first top of the range professional recording studios to be built in the Middle East. Fifteen years on, under new ownership and following completion of a major refurbishment programme, it is still very much in business.

The studio's new owner is noted Arabic singer Hussain Al Jasmi, who was a regular client at Funoon Al Emarat before he bought it. The facilities cater both for his own recording projects and commercial clients.

The refurbishment retains many of the original features of the construction, including the spacious live recording area and its flexible spaces, and the layout of the control room. "It began as a five-star recording studio, but after 13 or so years of wear and tear, it was looking shabby," says David Hawkins of Eastlake Audio. "As we still held all the original drawings and records from the original construction, we knew exactly what materials and the quantities that were needed for a refurbishment, and so it was no problem."

In addition to the cosmetic improvements, there are major changes within the control room. The original installation featured a Soundcraft analogue console and an eight-track Studer tape machine. The refurbishment has seen a 16-fader Digidesign D-Command mixing surface and Pro Tools HD3 workstation system installed.

Sonacom Invests In Xynergi

FRANCE – Post production specialist Sonacom has transformed its facility in Neuilly sur Seine by installing Fairlight Xynergi desktop media creation systems in each of its four High Definition 5.1 surround sound studios. The full service facility, which counts major French broadcasters and advertising agencies among its clients, managed the transformation in less than three days with the help of technical staff from Fairlight's French distributor, EuroMedia Technologies.

Denis Derigent, Managing Director of EuroMedia Technologies, says: "We started the installation on Friday night and had to have it completed by Monday morning in time for a client booking. Sonacom is one of the first Fairlight customers in the world to completely transfer to Xynergi, and the main challenge we faced was ensuring that the engineers adapted to their new environment in such a short timeframe. It was very tough and very sudden, but they were incredibly motivated. By Monday morning everything was running perfectly, and the engineers were already working confidently with their new equipment."

Better than hardware.

Retro

The Retro plug-in line from McDSP is a new class of plug-ins with vintage style and completely original designs, backed by McDSP's reputation for superior reliability and customer support.

See McDSP's Retro plug-ins at the Winter NAMM 2009 show booth #6405 (near Digidesign) and online at www.mcdsp.com, and find out how a software plug-in is better than hardware.

McDSP

PROFESSIONAL AUDIO PLUG-INS

WWW.MCDSP.COM

Hearing What Parliament Has To Say

KEVIN HILTON listens in on the sounds of parliament of the Northern Ireland Assembly.

The United Kingdom of Great Britain and Northern Ireland, to give this collection of rocks huddling off the coast of mainland Europe its full title, is unified but also very much the sum of its parts. In recent years Northern Ireland, Scotland, and Wales have been granted devolved government, although breaking up the union and granting full independence is resisted by most politicians in London and many citizens.

Each devolved nation has its own parliament, and as with the blueprint of Westminster these are televised, although TV cameras have been covering the UK Parliament for 18 years. The first plenary (full) session of the Northern Ireland Assembly (NIA) after the summer recess took place in September, boasting an upgraded microphone system that leads new robotic cameras, which are shooting in high definition to create a completely future-proofed library.

Televising parliamentary proceedings plays an important role in involving everyone in the business of governing the Province. "Northern Ireland has a politically aware population, with the highest voter participation in the UK," says Brendan O'Neill, NIA Project Manager. "We need optimum coverage because the communities here have invested in making the Northern Ireland Assembly a success." This means providing broadcasters with good links and quality pictures, as well as giving access to coverage of sessions to the public, particularly schools and community groups.

The NIA meets in the Parliament Buildings in the grounds of Castle Estate, to the east of Belfast. Two chambers are housed there; the main legislative chamber and what was the upper house, the Senate, which is now used for committee meetings and youth parliaments. In the audio-visual installation of 1998 the Assembly Chamber and the Senate each had microphones and four robotically controlled cameras fitted. Committee rooms in the Parliament Buildings complex are equipped for audio coverage only.

Ten years can be a long time in equipment terms, and as the NIA broadcast operation has to be 'no fail', the decision was taken to replace the existing system with something that will last another decade, which explains the move to HD. "Changes had to be made to meet the needs of the public and reflect advances in technology," says O'Neill. A tender specification was drawn up for the removal of the old analogue robotic cameras and their replacement with digital HD models, plus new cabling, racks, monitors, and furniture, plus the necessary training and support.

The most crucial requirement was for the new camera system to work in conjunction with the existing microphone selection and operation set-up, which is run by an operator who identifies those who wish to speak before switching the mics 'live'. A suitable electronic interface between the vision and audio was a major requirement.

The project went out to tender in April this year, and on May 5, was awarded to systems integrator TSL (Television Systems Limited). To keep to the schedule a large proportion of the equipment was assembled and tested at TSL's Maidenhead factory, while the Parliament Buildings in Belfast were being fitted with cables. "All the companies that tendered for the contract were looking to pre-build off-site but there was still a lot of work to be done here," comments Brendan O'Neill.

There are now six cameras in the main Assembly Chamber and five in the Senate. These are the Sony HDC-X310 multi-purpose model. The cameras are mounted on robotic heads that are part of an overall Shotoku automated camera control system, which is linked to the microphone controller. The mic switcher sits in the balcony above the Assembly chamber and runs a touch screen that presents a graphical representation of the room, showing where the Members of the Assembly sit and the position of the 84 mics. The core of the user interface is based on TSL's TallyMan system, a PC-based selection management and control application that works with the majority of switchers, routers, vision mixers, and multi-viewers used by broadcasters today.

This touch screen controls the existing IRP microphone system; when the operator selects a particular mic a cue is sent to the Shotoku robotics system, which automatically searches for shots of the relevant area. The Assembly Chamber and the Senate have their own production galleries, and the directors there are able to select the best shot from those presented, which is then mixed into the main feed through a Ross vision mixer.

HD footage is managed and recorded by a Gallery Sienna (System Integrated Network News Automation) asset management system, which is based on off-the-shelf Apple hardware and servers, and incorporates virtual video tape recorders. The equipment is owned by the NIA itself but is operated under contract by local broadcast service company Pi Communications, which has nine staff working at the Parliament Buildings to cover proceedings. The video system is also integrated with the overall IT infrastructure of the Assembly and the hope for the future is that people will be able to browse the tape archive over the Internet.

Brendan O'Neill points out that there are the matters of cost and security to be considered before this becomes a reality, but he hopes the new AV system at the NIA will go beyond being just a way of storing speeches. "This is an exciting and dynamic time for the Northern Ireland Assembly," he says, "and we need exciting and dynamic technology to bring our work to the local people."

Introducing the new PortaGig.

Running at FireWire 800.

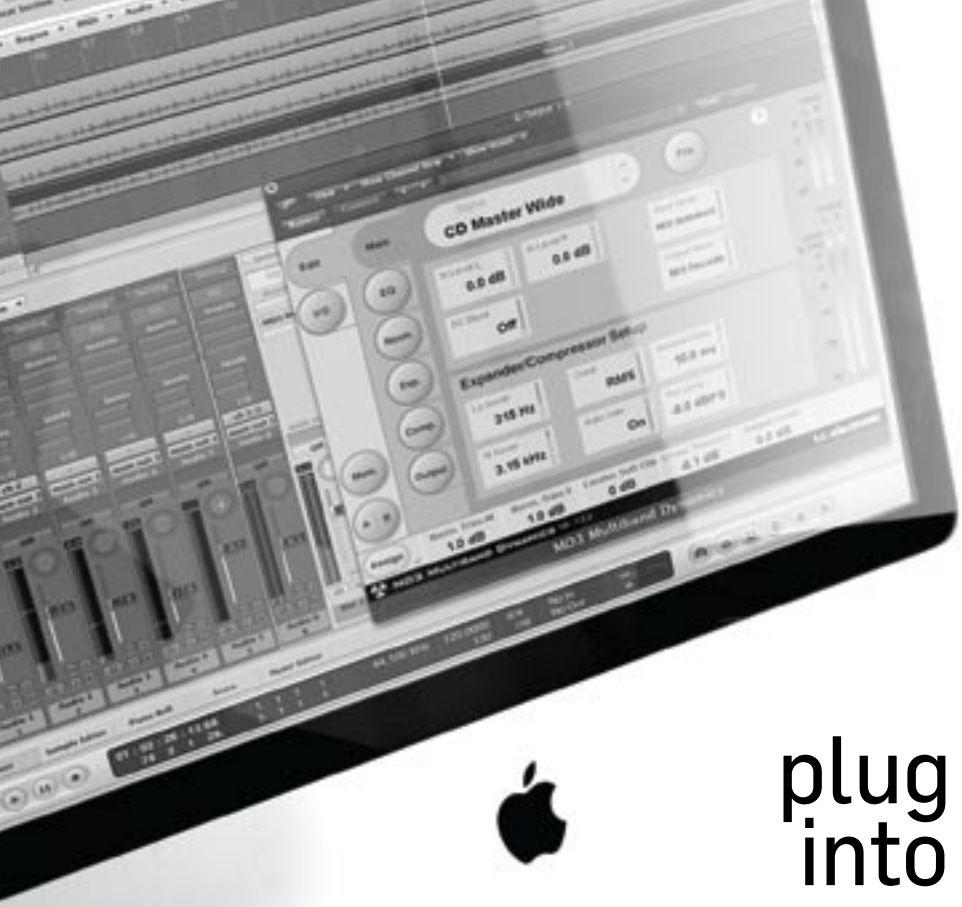
Glyph's second generation PortaGig 800 can handle over 55 tracks of 24bit/48k audio, with edits, running on FireWire bus power. Weighing less than 10 ounces, all this power is backed by Glyph's Advance Replacement and Data Recovery Policies.

Up to 320GB capacity
(2) FireWire 800, (1) USB 2.0 port
7,200 or 5,400 RPM SATA II drives
Universal AC power supply included

GLYPH Europe

Store in a cool place..

Steyler Str. 121 D-41334 Nettetal
+49 (0) 2157 870 22 32
mrichert@glyphtech.com
glyphtech.com



plug system 6000 into your DAW

PowerCore 6000: System 6000 plug-ins for your DAW. You now have the same award-winning algorithms used by high-end mastering studios and Oscar-winning sound designers all over the world. Imagine what you'll be able to do with legendary classic reverb, vintage emulations and source-based reverb. You'll have full access to MD3 multiband dynamics for no-compromise mastering, precision brickwall limiting and unsurpassed stereo to 5.1 conversion.
Plug in for more power at

tcelectronic.com/**PowerCore6000**

SYSTEM 6000 Ultimate Multichannel Processing Platform POWERCORE 6000

tc electronic®

ALISTAIR McGHEE finds that Tascam's dual-format recorder just begs and pleads to be played with, an appeal he's happy to acquiesce to.

If, dear reader, you are eager to get to grips with Compact Flash, let me assure you that you have come to the right place, but for the moment, excerise a modicum of patience as we first consider the rotating silver medium that we have come to know and love so well.

Like the baddie in a cheap horror flick, CD is hard to kill, surviving DAT, DCC, minidisk, DVD, hard disk, and even Compact Flash. Just when you think it's safe to record on another medium it turns out that CD was a good choice after all. The Tascam SS-CDR1 is the third CD machine I've reviewed in the last year or so, and is just as compelling a proposition as the Fostex CDR500 and the Denon CD640N. I wanted a CD recorder with the ability to do simple edits before committing to burning the disk, and the machine had to fit in a 1U rack space.

My purpose was simple. Aside from broadcasting, we often do public workshops where people can roll up and have a go at being a DJ or a news reporter, and when they've done their best Chris Moyles impersonation it's nice to give them a CD to walk away with, immortalising their time on the mic to play in the car on the way home. We often conduct these workshops outside our lovely bus-cum-studio under a gazebo, so the kit has to be carted around. 'Thin and light' are therefore essential characteristics, as is 'easy to use'. So when I flicked through the Tascam catalogue I got quite excited by a machine that did all that, and had a Compact Flash recorder thrown in.

TASCAM SS-R1 & SS-CDR1

Compact Flash/CD Recorders

Of course I've really got you this far under false pretences. The SS-CDR1 is first and foremost, a Compact Flash recorder with built-in CD recording as a bonus, it's just that I came in through the wrong door. But why would you want a Compact Flash recorder? Isn't this the age of the DAW when the laptop is king? Well, yes, of

THE REVIEWER

ALISTAIR McGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.

SENNHEISER

AUDIO MEDIA 2008 Gear OF THE Year

Our Smallest Sound Pro

Whether for musicals and live shows, or for broadcasting applications, the MKE 1 – Sennheiser's smallest clip-on microphone – performs at its best in all situations where a microphone needs to be virtually invisible and still offer outstanding sound quality. Its special gauze and multi-purpose cap offer additional protection from moisture so that it only picks up what it is meant to pick up – perfect sound.
www.sennheiser.com

course it is, but there are so many niggles with computers: the number of leads, mains plugs, that it takes an age to boot, that you need a tidy sound card to take your balanced audio and squirt it back to the desk, and although the drivers/software/operating system are all 99.8% reliable, sometimes that's not enough. The glory of Compact Flash is that it's cheap and getting cheaper, it boots sharpish, it outlasts a CDR by miles, and it's as easy to use as a shoelace.

I was stuck at the Porthcawl Elvis Festival (I kid you not) trying to record a three-hour show. No problem, a 4GB card will do that nicely. Which is why I did punt the SS-CDR1 at my colleagues in the orchestra – who loved the longevity of the 8Gb card capacity, but really did need 24-bit, which is only available on Tascam's HDR1.

The other argument for CF is the widespread availability of CF-based field recorders from Tascam itself, Fostex, Marantz, Sound Devices, and Nagra. And although the medium is compact, you can at least write a label on it. This combination of field recorder and studio format is something CDR never really managed, putting CF closer to minidisk, but allowing us to escape the dreaded audio compression, although these machines will record to MP3 format, if that's your thing.

Plugging a keyboard in gives access to quick titling of files and loads of keyboard shortcuts. The editing is of the old-fashioned minidisk style: you select an edit point and jog it back forward, while the machine cycles in loop playback. It could really do with the waveform display from the Fostex. Now, maybe you're wishing you had your laptop, but for simple top and tailing it gets the job done. One thing I did notice when tidying up my three-hour Elvis epic, is that before the system makes a divide edit, it has to copy the entire file. Even I'm not that much of an Elvis fan. So, for three minute songs, editing is a yes, but for three hour symphonic meisterworks... maybe not.

The front panel controls are laid out just like an old fashioned CD or MD player, and your live jock will have no problem with this. I snuck one in between two CD players at a live OB and we bounced along without dropping a beat. I got to play with the RC-SS20 remote control for instant replay, which features 20 hot start keys and a refreshingly long control lead. Press 'flash load', and the keys load up faster than a grunt in Call of Duty. A nice feature for those early morning starts, when you fire a cut to take some level the light on the button flashes as if to say "Play me next, play me next." Which on the whole is much better than the, "Do you feel lucky punk, well do you?", given off by some keypads. If you have the SS-CDR1 then the hot key-pad works with both CF and CD formats, which is a nice bonus.

My take on the Compact Flash recorder is that it's nice to have, in some ways less hassle than CDR – no finalising, longer duration, and media that fits in your pocket, and of course it isn't prone to scratching – and loading the files into a computer is even easier than ripping a CD.

Having said all that, I find the dual-medium recorder the most attractive. CDR when you want to play the result in the car, the flexibility of edit then copy to CD, and the ability to rip from CD when required, without a PC. I put my money where my mouth is and shelled out for an SS-CDR1, and you can't really say fairer than that.

INFORMATION

£ SS-CDR1 GB£779.00, SSR1 GB£459.00 (inc.VAT)

Ⓐ TEAC UK Ltd., Unit 19 & 20 Hatters Lane, Watford, Herts, WD18 8TE
Ⓣ +44 (0) 1923 438880
Ⓦ www.tascam.co.uk

Ⓐ Tascam US
Ⓣ +1 323 727 7617
Ⓦ www.tascam.com

MERGING

Pyramix™ V6.0

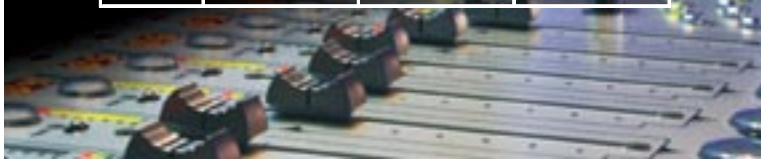
MassCore™

The Most Powerful Digital Audio Workstation in the World...

A new era begins in DAW technology with the introduction of **Pyramix** V6.0 using Merging's new **MassCore** technology. Never before has so much processing power been available in a digital audio workstation and with latencies far below anything that has ever been possible in the past. Configurations from 16 to 384 input and output channels (768 I/O) with sample rates up to 384kHz and DSD/DXD while retaining all the processing resource for the newly supported VST in all I/O channels, Inserts, Auxes and Buses with automation. Pyramix V6 still retains its open architecture with interchange capabilities through OMF, AAF, XML, Apple XML, CMX-EDL, AES31, OpenTL, ProTools, DAR AKAI and more.... For full details of Pyramix V6 and MassCore visit the Merging website at...

www.merging.com

Pyramix MassCore 256+			
kHz	Input Channels	Output Channels	Bus/Aux Channels
44.1	384	384	256
48	384	384	256
88.2	192	192	128
96	192	192	128
192	96	96	64
384	48	48	48
DXD	48	48	48
DSD	48	48	48



BERLINER U77

Multi-pattern Tube Microphone

The U77 is a admirable choice as your one and only truly high-end tube microphone, says DAN WOTHKE.

THE REVIEWER

DAN WOTHKE runs the gauntlet of all things media-related at Nashville's Belmont Church in his role as Media Director. He invites you to e-mail him at dwothke@yahoo.com.

Berliner Microphones – named in part after Emile Berliner, one of the first builders of microphones via a telephone transmitter in the late 1800s (which was eventually acquired by Bell Telephone) – completely skipped the cluttered budget microphone pool and jumped right into the elite world of high-end, hand crafted, European-designed tube microphones. According to the manufacturer, the company name became a no-brainer as the capsules and transformers for its high-end offerings wound up being manufactured in Berlin – just call it nomenclatural destiny.

I spoke at length with Dana Paul, the man behind Berliner, to voice my concerns about investing the dollars to purchase a product – the U77 multi-pattern tube microphone – from a startup company such as his; it was a concern that I felt was justified. Dana assured me that Berliner was created out of a passion for creating music, as he himself is a producer and has a large collection of modern and vintage microphones. He has many other successful ventures and has not put his eggs all in the Berliner basket. I say this because I have personally reviewed equipment from startups in the past to find that only a few months after print, the company's doors are closed. For Berliner, those concerns are put to rest; should the mic ever have any trouble, it will be covered under its lifetime warranty from the Berliner US support centre.

Features

The U77 is just over 9 ½-inches long, weighs 11lbs 5oz, and is constructed of 'duraluminium' and stainless steel. It is right at home in its U47-style shock mount with hinged clasps to assure a good grip on the microphone.

It boasts three patterns – omni, figure-of-eight, and cardioid – with a frequency response of 30Hz to 20kHz. Connectivity between mic and power supply is provided with a GAC7 10m Gotham cable using a 7-pin Tuchel connector. The brick-style power supply is encased in a thick black aluminium enclosure with the internal parts accessible via four screws. The single PCB is roomy in layout with all components well spaced out, and easy to follow traces located on the bottom of the board. The outside end of the power supply has a standard IEC power connector, selector for 115/230V A/C, power switch, and indicator light. The other end consists of the 7-pin female Tuchel connector, female Neutrik XLR, and pattern selector switch.

Overall, this is a very well designed and constructed mic with no low dollar Asian components. Even the transformer is hand wound in Europe and fully inspired by the original M7/49, credited in large part to its smooth and natural sound. Included with each microphone is a custom frequency response plot.

suppress *(sə'prɛs) vb.* to reduce or eliminate a particular frequency or frequencies in a signal.

SuprEsser *(sə'prɛsə) n.* a new plug-in from Sonnox.

Sonnox

The Oxford SuprEsser plug-in from Sonnox .

A new definition in de-essing.

- Transparently controls aggressive frequencies
- Linear Phase Dynamic EQ
- Automatic Level Tracking
- Graphic Display (FFT) for increased accuracy
- Full spectrum operation
- Easy to use & advanced mode for ultimate control

Time limited introductory price offer.

Oxford Plugins

www.sonnoxplugins.com

During my time at Masterfonics, there were many days where I found myself locked down in the shop with a vintage, high dollar tube mic disassembled on the bench while I tried to track down various problems. Whether testing and replacing tubes, fixing cold solder points, or testing the components, I became quite familiar with the build and quality of vintage German microphones, and even the latest high dollar microphones. Here, I decided to put that experience to work, taking apart the Berliner microphone for a look under the hood.

Inside, the mic looks similar to many of the classic mics with hand crafted point-to-point wiring accompanied by two easy to follow circuit boards. Clear Plexiglas dividers separate the diaphragm from the electronics and reinforce the construction of the microphone. The Raytheon NOS 5703 military-grade tube is hard wired due to the power requirements of the tube. This tube is known for its low noise and long life span, and is similar to the original M49 tube, the AC701K. The capsule is hand-built and skinned by ex-Neumann engineer Siegfried Thiersch, one of the original builders of the M7 capsule. The U77 is built exactly the way he built the original M7 – the Berlin double ring type – with the exception of using Mylar instead of PVC, which deteriorates over time and is subject to environmental conditions such as heat or moisture. According to the manufacturer, PVC components are one of the reasons why the original M7 sounded slightly different from one to another.

Even the U77's case was designed with excellence in mind; it utilizes 600 and higher denier nylon, DuPont Cordura, highest quality ¼ to ½-inch plywood, high-quality vinyl, polyester, and leather, with complete protection against humidity and other elements. Although I was not brave enough to try, it is claimed that the case can be fully immersed in water without the mic even getting damp.

In Use

My first test for the U77 was a female vocal on a song that ranged from low and raspy to high and, if not careful, ear piercing high-mids. I tried a few other low to mid-priced condenser microphones on this particular vocal, and each time I was fighting to calm down the sonics. The signal chain was the U77 to a Summit 2BA-221 dialled completely into the solid state circuitry, followed by a dbx 160XT compressor set to just barely grab the loudest points of the vocal.

After listening to a dry run, it was decided that no external EQ was necessary. The intimacy in the lower part was beautifully captured with the U77. Proximity really exposed the vulnerability the singer was imparting when the pop filter was 1 ½-inches away from the microphone. The true test was when the belting started in the higher ranges. The U77's character really shone, as what are usually offensive frequencies were naturally smoothed out; not dulled in any way, but more like the harshness was rounded off.

This was also the result with a male singer with more of a baritone/alto range; the mic was superb in capturing the performance while naturally rounding out what are often troubled frequencies without the assistance of equalisation.

The mic was lent to another engineer to use on some overdubs consisting of banjo, acoustic guitar, and violin. The basic signal path included the U77 into a combination of mic pres from API and Millennia, a dbx 160 for compression and, occasionally, the A-Designs' Hammer HM2EQ tube EQ for added colouration to taste. Regardless of the chain, the results were excellent in each instance. So far, the U77 was really proving itself to be a great mic to have on hand for all applications. A testament to that was the violinist – a mainstay in the Nashville recording community – had such high affection for the results that he inquired about how he may acquire a U77 for his personal collection. This unsolicited endorsement spoke highly of the microphone capturing the body and fullness of the violin.

Summary

Like all microphones, the Berliner U77 has a character and colour all of its own. Whether or not it sounds like the M7 capsule is up for debate, as I have heard M7 capsules and many other vintage mics that don't sound like each other due to age and wear. The selling fact for this microphone is that I would not hesitate to line it up with its vintage and modern counterparts in a shootout to find the best microphone for the desired result. For a facility where only one high-end tube microphone is an option to have on hand, the U77 is an admirable choice that would not disappoint as the primary go-to mic. In the "put your money where your mouth" is department, that is just what we did at our studio: we made the U77 our primary microphone for spoken word, vocals, and a plethora of instrumentation – and have not once regretted the decision.

INFORMATION

£ US$3,995.00

Ⓐ Berliner Microphones, USA, 4599 Parkbreeze Ct, Parkway Center, Orlando, FL 32808
Ⓣ +1 888 642 8447
Ⓕ +1 928 752 3303
Ⓦ www.berlineraudio.com

The new 4x4 all terrain microphone
sE4400a
• 4 Polar Patterns
Cardioid, Hyper Cardioid, Figure of 8, Omni
• 4 Pads and Cuts
Pads: 10dB, 20dB
Cuts: 60Hz, 120Hz
• Unique Shockmount
Allows extreme close mic-ing*
• Stereo Pair
Also available as a Factory Matched Stereo Pair
Jacknife Lee
'The sE4400a is a beautiful microphone. I've tried it on nearly everything I can with stunning results. Wonderful warmth, depth and amazing clarity. It sounds and looks superb. It will be a classic.'
REM, U2, Snow Patrol, Bloc Party, Green Day, Vega4 The Hives, The Editors ...
sE4400a
0845.500.2.500
www.sonic-distribution.com
SONIC DISTRIBUTION
Sound Engineering
www.soniectronics.com

ALISTAIR McGHEE finds himself victim to a syndrome that no Doctor can cure. Not that he'd want to be cured, in any case.

ADAM S2A

Studio Monitors

When you get to my age it's hard work not to start every review with "Many years ago...", and on this occasion I'm not even going to try to resist that temptation. Many years ago when I worked in hi-fi, I came across a a pair of loudspeakers featuring the revolutionary Heil air transformer tweeters. I remember a fine top end, but not much else about the sound. I do remember how the technology worked – air is squeezed from between the accordian-like folds of the Heil driver, the folds provide a large increase in surface area, which in turn results in an increase in driver efficiency. I think they were expensive imports back in the early 80s and never really made a big impression in the crowded UK hi-fi market. Maybe integrating the tweeter with conventional woofers was a problem.

Sahara Surprise

A couple of years ago I had a pleasant surprise coming across Heil-equipped monitors at Sahara Studios, and I made a note at the time to look up ADAM loudspeakers. I haven't exactly been quick off the mark, but better late than never. Unity Audio (the UK distributor) kindly supplied me with a pair of ADAM S2A monitors, representing the middle of their high quality range of near fields, if you see what I mean. To look at, the S2A are quite the business in black with some neat cabinet work around the Heil driver. At the bottom of the front panel are some EQ settings for the on-board amp, and a gain trim. Personally I'd like a full range volume control, but you can't have everything. The first test of any new speaker is: does it produce NMS? NMS (or New Monitor Syndrome) is vital – when you drop in a new speaker it should always excite you in a musical way. By that, I mean you can't wait to listen to your Travis Barker remix, or Californication, or Between the Buttons, or all of them at once. New speakers should entice you to remix the last thing you were working on and the first thing you ever mixed. You should be digging through your hard disk back ups looking for that tune on which you never quite got the balance right.

Of course NMS doesn't mean the speakers are great, but no NMS means they almost certainly aren't. One good measure is how long does NMS lasts – if you're still digging out mixes after a couple of weeks, then you're on to something.

Taking It From The Top

The other dimension I find key is the whole issue of the top end. I can forgive much below 200 but very little above 2k. For me it's about how tiring a speaker is. Everyone knows that a speaker with a hot top end will sound extra detailed on a quick listen and will jump out of the line up in an ABC demo, but you pay for that when you spend hour after hour in front of your

THE REVIEWER

ALISTAIR McGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.

basement, you might need to look for something bigger. I don't think you'll get much better bass of a speaker this size – it's a physics thing.

The Need To Tweak

So there you have it – a great mid/top and a decent bottom end, nice enough cabinets, and they do loud. "But what of the built-in EQ?", I hear you cry. Well, to be honest, I never felt the need to tweak, except turning the gain down a bit to match my Merging Dua. It's there if you want it. And in the end I even forgot about the clever technology of the Heil driver – it's the sound after all. It's hard to have anything but enthusiasm for the ADAM S2As, I would very happily mix on these five days a week and twice at the weekend. This quality doesn't come cheap, so don't expect to snag a pair for a couple of hundred quid, but after a month I'm still getting a healthy dose of NMS, and for me that's worth paying for.

INFORMATION

£ GB£1,128.00 (inc.VAT)

Ⓐ ADAM Audio GmbH, Edertr. 16, D-12059 Berlin, Germany
Ⓣ +49 30 863 0097 0
Ⓕ +49 30 863 0097 7
Ⓦ www.ADAM-audio.com
Ⓔ info@ADAM-audio.de

Ⓐ UK Distributor: Unity Audio
Ⓐ The Elms Barn, Baythorne End, Halstead, Essex CO9 4AB
Ⓣ +44 (0) 1440 785843
Ⓕ +44 (0) 1440 785845
Ⓦ www.unityaudio.co.uk
Ⓔ sales@unityaudio.co.uk

monitors actually working. This is especially true when balancing speech. The upshot of it is that much like the rest of me, my old ears get tired easily and I'm very unforgiving of any unforgiving HF.

I've had the ADAMs in my system for a month or so now, and they are very, very good. I like to think that good monitors, like good lenses, offer increases in detail, contrast, and tonal accuracy. I found myself constantly hearing things in old familiar recordings that had slipped past me with other speakers. I know from past experience that often if I return to the previous monitors, I will be able to hear what had previously eluded me. But I 'heard it here first', if you know what I mean.

"To be honest I don't listen as loudly as I used to, but for many of us, the ability to generate high SPLs without racking up distortion is a significant plus. I found the S2As coming through with flying colours, staying clean at all the levels I would want to listen to."

From Way Up High

The third area of monitor design that is often a problem is performance at higher levels. As you whack the gain up, all sorts of non-linearities start to pop up. Resonances bloom, curves run off the knee, and saturation and compression effects begin to manifest themselves. To be honest I don't listen as loudly as I used to, but for many of us, the ability to generate high SPLs without racking up distortion is a significant plus. I found the S2As coming through with flying colours, staying clean at all the levels I would want to listen to.

Listening loud, I did begin to ponder the question of bass extension. ADAM's literature quotes 35Hz +/-3dB, and that does seem like a long way down for what is not, after all, a huge box. One of my few reservations about the S2As would be that if a lot of your mixing is down in the

Top Ten Winter Deals

Audio Media rounds up some exclusive year-end reader offers!

If, like so many these days, your day starts off with a bowl of credit crunch and freshly squeezed economy, then you'll appreciate this cracking little collection of exclusive offers, news, bundles, and discounts from some of the top names in our industry.
The bargains aren't just restricted to your local shopping mall, so we rounded up some great gloom-busting deals for the canny pro audio and broadcast buyer who likes to stay ahead of the pack.

In the spirit of goodwill, and to help put the Festive in your season and the Happy in your new year, these generous suppliers have offered to give you some extra bang for your buck – and just for *AM* readers. Unless otherwise stated, these promotions are for the UK only, subject to availability and valid until Jan 31. But just like Christmas shopping, best not leave it to the last minute! (Be sure to quote '*Audio Media* Winter Deals' when confirming your purchase).

Cream Recording Studios

The best deal in town?

8-hour session – only £495 ex.VAT
24-hour lockout – only £795 ex.VAT

Save shopping around with this truly great deal from Cream, the fresh new large-scale studio in West London featured in *AM* earlier this year.
This comfortable, state-of-the-art working environment delivers smooth and efficient running of music track laying and mixing sessions. A spacious Recording Architecture-built control room features a new 72-channel Solid State Logic Duality console, and stunningly accurate custom ATC surround monitoring, plus a full range of vintage and classic outboard equipment.

Alongside, there's a beautiful double-height live room with adjustable acoustics and two separation booths.
Until March 31, 2009 – a saving of over 50% including all the gear you need.

Cream Recording Studios
Tel: +44 (0) 20 8963 8622
Web: www.creamrecordingstudios.com
E-mail: info@creamrecordingstudios.com

Telefunken AK47

A serious weapon for serious music

£795.00 ex.VAT (A Huge 30% Saving!)

The AK47 variable pattern large diaphragm mic with NOS Telefunken EF732 tube and custom TAB-Funkenwerk hand wound transformer, power supply, suspension, cable, and wooden case, complete with 5-year warranty.

"I used the AK47 on a long vocal session and it performed faultlessly, capturing a well-balanced sound that managed to be solid at the low end and smooth and the top".
Paul White – *Sound On Sound*

Unity Audio Ltd.
Tel: +44 (0) 1440 785843
E-mail: sales@unityaudio.co.uk

SCV's Writing & Production Christmas Hamper

A fantastic box of goodies containing all the tools to take that initial spark to the finished CD!

RRP – £1,034 inc.VAT
Special Price – £869.00 inc.VAT

It includes the MR16HDCD, 16-track hard disk recorder with built in FX, mastering, and CD burner. A pair of PM04 studio monitors finished in stylish high gloss white. Superlux CMH8A condenser and R102 ribbon microphones, plus cables and shock mounts. For good measure there's also a pair of T5 headphones and an Aphex Punch Factory DI box with optical compressor.

You've already saved 2.5% on VAT, but SCV thought it should be a touch more, so have thrown in the other 15%!! Happy Christmas from SCV.

SCV London (in conjunction with Digital Village)
Tel: +44 (0) 208 418 0778
Web: www.scvlondon.co.uk

Tubefire8

8-Channel Valve Pre-Amp with FireWire Interface

£385 ex.VAT Plus FREE USBPhonoPlus – Digitise Your Vinyl for Christmas!

(Combined UK Suggested Retail £615.61 inc. VAT @ 15%)
The TubeFire8 delivers the best of all worlds in one valve-driven digital audio interface package. Eight incredibly warm second-generation discrete Class–A valve microphone preamps with balanced I/O, headphone, and FireWire connectivity.

Every channel offers XLR and TRS balanced inputs, 70dB gain, –10dB pad, high pass filter, phase invert, phantom power, clip indicators, and wide-range LED meter.

ART's preamps provide clean, quiet gain with incredible transparency. Eight balanced outputs can be driven from the analogue microphone preamp inputs as an in-line valve preamp, or from the D/A converters, making it a multi-channel audio interface for Mac or PC.

FREE USBPhonoPlus! Transfer any analogue or digital audio source, including a turntable, into a computer via a standard USB connection!
Offer subject to availability and can be withdrawn without notice. E&OE.

Sonic8
Tel: +44 (0) 8701 657456 *(quote "AM TUBE OFFER")*
Web: www.sonic8.com

Ghost Reductions

An Amazing 50% off Ghost Products!

Ghost Acoustics is an off the shelf Acoustic product line from the people that brought you sE microphones and the Reflexion Filter

It is the only truly professional, yet affordable, Acoustic treatment that actually works. All panels are fully fire retardant, full frequency response (unlike foam based products that are only effective treating HF), and fully portable. Wall fixings are supplied as standard, the mounting system making it extremely easy to remove and add panels very quickly to change the sound of the room depending on recording or tracking requirements.

A Gobo stand is also available, onto which wall panels can be fitted for tracking guitars, vocals, and drums. Until Jan 31, 2009, you can buy Ghost products at 50% off standard retail price while stocks last!!

"I'm really happy with my Ghost Panels, the improvement they have made to the sound of my room at Air Studios is massive… conventional systems were rubbish in comparison." Simon Franglen – Producer (Celine Dion, Michael Jackson, Eric Clapton, Whitney Houston)

Sonic Distribution

Tel: +44 (0) 845 500 2 500

Web: www.sonic-distribution.com

Brauner Valvet

Huge Savings from KMR

Limited time offer: 20% off !

A smaller version of the legendary VM1 with the characteristic clear, open and warm sound that has made Brauner a sought after name in microphone land. Carioid and Omni patterns. Hand crafted in Germany, using all locally sourced components. Only £1650 ex.VAT !

Also: Brauner Valvet – Anniversary Edition. A smaller version of the legendary VM1 with the characteristic clear, open and warm sound that has made Brauner a sought after name in microphone land. Carioid only. Hand crafted in Germany, using all locally sourced components. Only £1500 ex.VAT.

KMR Audio

Tel: +44 (0) 20 8445 2446

Web: www.kmraudio.com

Sonifex SignalLED Range

Exclusive News for Audio Media Readers

Be first in line! This a first-time in print, special heads-up for *AM* readers about the new SignalLED range of studio signs from Sonifex coming early 2009.

Designed for studio installers and systems integrators, these elegant RGB LED signs contain the control electronics themselves, so they can be simply configured onsite.

Each sign is 40cm or 20cm long. The 40cm signs can be split into two 20cm sides which can be separately, or jointly controlled, e.g., a 40cm 'ON AIR' sign, or twin 2 x 20cm signs, such as 'ON AIR' and 'MIC LIVE'.

- **Choose from white, green, red, blue, yellow, and orange**
- **Choose from a large range of different signs**
- **Four illumination modes: constant, flashing, pulsing, and off**
- **Two control pull-low inputs.**
- **Single or twin signs**
- **DC input PSU supplied**
- **Flush to the wall or end-mounting**

Sonifex

Web: +44 (0) 1933 650700

E-mail: sales@sonifex.co.uk or

AE22 Monitors & China Cones

Stunning Studio Monitor Deal from Sound Network

Buy a pair of the New Acoustic Energy AE22 Active Studio Monitors, and get a set of China Cones worth £125.00 FREE!

The New AE22-04 Studio Monitor has been designed to mimic the response of an NS10, but with greatly enhanced detail and a far superior time response. The AE22 is a low distortion, closed box speaker with an exceptional time domain performance (better than 40dB down within 5ms) and good horizontal off-axis consistency.

The monitors incorporate high quality class A-B power amplifiers totaling 160W for each speaker, and including EQ presets to provide adjustment of tonal balance and low frequency bandwidth.

China Cones have been adopted by many professional producer/engineers and world renowned recording studios, and successfully isolate studio monitors from unwanted resonances and vibrations, resulting in a tighter low end and a clearer mid range. Stereo imaging is enhanced and noise floor reduced – making mixing simple.

Pair of AE22 Active Monitors are only £879.86 inc. VAT, and for a limited period, get a China Cone set FREE!

Sound Network

Tel: +44 (0) 20 7665 6463

Web: www.soundnetwork.co.uk

White Rooms

Huge Rate Savings!

Save Over 50% on a 12-Hour Booking!

This is a phenomenal offer. Based within the Cream Recording Studios complex, West London, are the six White rooms for programming, preproduction or post-production use – all with overdub booths along with two chill out/ client lounge areas.

Designed by Recording Architecture and built to exacting acoustical standards, there is a dedicated Sohonet-leased line connection, Apple Xserve Gigabit Ethernet-based networking, and Digidesign DigiDelivery|GT systems. A massive rental inventory of pro audio/video equipment is on site with full media production technical support.

Until March 31, 2009, a 12-hour booking including either a Pro Tools system, Apple Final Cut or Avid Adrenaline, is just £125 + VAT. A saving of over 50%!

Tel: +44 (0) 20 8963 8622

Web: www.creamrecordingstudios.com

E-mail: info@whiterooms.com

Glyph Giveaway

Free PortaGig Hard Drive From Global Distribution

When it comes to external storage, the pros use Glyph, the industry leader in hard drive solutions for the professional audio industry. Glyph's GT-Series FireWire hot-swap system has been critically acclaimed and unrivalled ever since its introduction in 2003, with its GT-Key system now standardised in many high-end studios, and with countless professional recording and touring artists worldwide.

Claim a free 250GB 5,400rpm PortaGig bus-powered hard drive when purchasing one of the following two systems; a GT103 1U hot-swap enclosure and any three GT-Key drives of 500GB or higher, or with every purchase of two GT062 2TB dual drive tabletops – perfect for high track-count sessions or sample library storage. Offer valid until the end of January 2009.

Global Distribution

Tel: +44 (0) 870 464 0600

Web: www.globaldistribution.com/audiomedia

The Curious Case of BENJAMIN BUTTON

STROTHER BULLINS talks to Supervising Sound Editor and Music Mixer Ren Klyce about his work on what is arguably the most curious film of the year.

Director David Fincher – Director of such successful, notable films as *Se7en, Fight Club,* and *Panic Room* – has completed his latest major project, an intriguing film called *The Curious Case of Benjamin Button*. The script, written by Eric Roth, was adapted from a short story of the same name written by F. Scott Fitzgerald and published via magazine in 1922. The story is set in New Orleans at the end of World War I, where a boy named Benjamin Button is "born under unusual circumstances" – as an aged man, already speaking, and becomes younger as time progresses. The film stars Brad Pitt as Button and Cate Blanchett as his love interest, Daisy.

For the film, Fincher once again worked with his longtime friend and sound collaborator Ren Klyce, who served as both Supervising Sound Editor and Music Mixer on the project. The duo goes way back. "I started working with David when we were both hired at the early age of 18 to work with a colleague/filmmaker – also a colleague of George Lucas – by the name of John Korty," explains Klyce in a jovial, reminiscent voice. "I got a job working for him in the animation department; David got a job working for him in animation/visual effects. We were the youngest crewmembers and gravitated toward each other. That forged our friendship."

Fast-forward to the present, over 25 years later, and Fincher has directed what will surely be called his most ambitious film to date, which hits major theatres worldwide on Christmas Day 2008. Here, Klyce tells the story of the audio behind this curiously compelling film.

Subtlety In Sound

Throughout *The Curious Case Of Benjamin Button,* Klyce often took the road less travelled in modern film sound production: subtlety. Klyce shares with Fincher an appreciation of carefully conceived sound design, appropriate silence, and restraint from the over manipulation of audience emotions with music.

"Every filmmaker, when they are creating their films, is obviously trying to express some form of narrative," offers Klyce. "It's a tough thing to do because you're trying to create something yet, at the same time, not be in the way of the story. That's the challenging and tricky part of filmmaking: to make it feel effortless. David's approach is that he really wants the audience to feel not assaulted by his doings, his technique, and his craft. Again, the irony is that there is a lot of work that goes into his technique and craft to make it appear as if there's not a lot of work going into the craft. In other words, his approach as of late – as we're all transformational in terms of our work – is a great interest in subtlety and nuance. He wants the audience to pick up on the little details and get a sense of character and story without it being crammed down their throats with blatant dialogue, blatant photography, over the top music, and big sound. There are a lot of great films that are made in that spirit, but David's point of view, approach, and artistry allows all the beauty of all the crafts to join together. I believe it comes from a place of modesty."

The picture is largely a period piece set in 1918 New Orleans, which meant that sounds had to authentically reflect the environment. "The film starts and ends inside of a modern-day hospital in 2003 following Hurricane Katrina. It's the story of a woman and she's having her daughter read a diary to her: the story of Benjamin Button. So the film goes back and forth between present day and 1918. Considering the images, David wanted the soundtrack to play largely based on his picture editing. For instance, when we were in the present day hospital, he wanted it to be this terribly bleak and depressing place, but not as in a horror film. There was a moment that we wanted to play it up – nearly spooky and eerie with reverb on voices with the tone ever so ominous, etc. So you do that, experiment, and it's obvious within a few seconds that it's the wrong way to go because it paints it poorly. Again, it is about subtlety – subtle noise, subtle effects."

Breaking The Rules With Music

Some rules are just made to be broken. In the case of audio for Benjamin Button, Fincher originally did not ►

PRESENTED BY:
dts-HD™
Bringing Entertainment Alive!

want any score in the present day scenes of the film, but the directive was eventually "overruled by the thrust of the narrative and emotion," explains Klyce. "By then, music was carrying that emotion. For the first two-thirds of the film, we did try to adhere to the initial rule on score. Then, creating contrast from present day to the past was part of the challenge in both sound design and, of course, the music."

For the period sequences, music was mainly environmental, yet all music was clearly divided into one of two realms – period music or supporting score. "When I first read the script, my biggest net was, 'Well, there's going to be a lot of music in this' and David agreed," Klyce offers. "There was no television and radio was just starting, so 'live music' was a sound – New Orleans jazz. Eric Roth's script largely dictated those moments. What we found, and we all know, is that music in New Orleans is sound – it just all happens to be one sound."

On 'Milking The Cow'

Klyce terms playing with emotions via soundtrack as 'milking the cow', which is something that he and Fincher regularly try to avoid. However, in Benjamin Button, some amount of emotional leading via music was called for, yet it was always something approached with great care, offers Klyce.

"The balance between doing too much and not having enough is the line walked in David's films," tells Klyce. "In the past, some have criticised David's films for being cold, or heartless – and for good reason based on the subject matter in *Se7en, Fight Club*, and *Panic Room*: thriller-types that he has made. We all made a marked change in terms of style while being true to whom we are as his supporting cast as a filmmaker. That was very challenging."

Approaching The Music Mix

Klyce had the opportunity to live with the original music for some time, thanks to his early involvement with the film's Composer, Alexandre Desplat. This helped him later when his job title expanded to encompass Music Mixer, too.

"Spotting the film with him along with David, and working with him intimately – starting with piano demos – helped me know it very well," explain Klyce. "It seemed only natural that I should be the one holding the fader to control those moments; we had discussed them so closely. Having to start over with someone else [as music mixer] just seemed like it would take too long. Working with [mixers] David Parker and Michael Semanick is a musical experience in itself. When the three of us are working together, it is a great experience."

Knowing Where The Moments Are

Regardless of the hats worn by Ren Klyce, he says assuredly that the job of Supervising Sound Designer is always on his mind. "I'm always trying to see the film as a whole, not a sum of its parts, but simultaneously being very aware of them," he says, recalling the final stretch of audio work of Benjamin Button. "I know where all the special moments are in all the departments because I have been working with the editors who cut them – albeit in dialogue, Foley, ADR, or sound effects. I was also there for every moment of pre-dub. In these situations, everyone who contributes a sound, musical note, etc, wants it to be heard because there's been a lot of effort that went into creating that sound. At the end of the day, however, something will prevail. We are fortunate that, because I was in both music and effects camps, it never became adversarial." AM

LOCATION, LOCATION, LOCATION:

Ren Klyce on working at Skywalker Sound:

"We started off off-site. I have a studio in Sausalito, and that's where we were; it's fully capable, and I've produced a lot of work out of there. Yet I wanted to go to Skywalker for the very reason of efficiency.

"At a certain point in a film of this scale, division of labour is very, very important. When you're trying to tackle a project of this magnitude and keep it about the artistry and not about the management, it's great to go to a facility like Skywalker. It is a well-oiled machine that is constantly modified and tweaked to be extremely efficient in delivering a mix, allowing people to work together, and getting something done as quickly as possible with the least amount of headache. When you go there, it's all about the craft. You could probably produce what we did on a Pro Tools rig or two, but most of the focus would be on the technicality of how to do it, rather than the artistry of it. The result is affected. That's why it is so important to have an institution like Skywalker."

DIRECTOR DAVID FINCHER: ON AUDIO FOR *Benjamin Button*

On working with his audio team:

"I've worked with Ren [Klyce], Michael [Semanick], and David [Parker] for so long, it's like, 'Show me what you think.' We sit down, discuss it, and that's when we say, 'We have to be careful because we're losing this whole thing that we worked so hard to preserve, and it's being glossed over by this other thing.' You have a plan, and then you adjust that plan based on what the outcome ends up being. You have an idea of what the outcome will be, but you don't really know. Experimentation is such a big part of finding it, whatever it is.

On what Fincher wants from the audio department:

"We always want people we like being around, whose input is going to be a part of it. You want what you want from everyone on a movie: to be making progress. You want people who aren't going to look for problems just because they need attention; you want people who are going to contribute. I feel that the people that we've worked with can deliver whatever it is that we want to do. It's just a question of, 'what do we want to do?' For me, that's what we're always struggling to do: it's not trying to find the people to deliver, it's finding the idea."

On finding the sound of Benjamin Button:

"From the sound effects/design side of it, we're sitting there, thinking, 'Well, we're not doing the urban sprawl thing. What are we doing? We're doing period, and we don't want it to be Masterpiece Theatre. We want it to be sort of sparse. One of the things we were intrigued by was the musicality of New Orleans and the moments of the period. People were raising chickens and slaughtering goats in the French Quarter, so we wanted to hear livestock. We made those kind of early and deliberate commitments to sound."

When the absence of sound is the sound:

"That happens a lot. There are many times where you build something and you say, 'there's way too much going on.' That's probably, for us, more often than not. On this movie, we generally tried to make the lyrical work. As you get into a scene, there are best laid plans; a lot of times you'll find out that something in the music seems to underline a different character. It ends up feeling more about this other character and that changes the balance. But that's the stuff that you hope you'll find: new, different, or weird ways of looking at it all."

Pinewood's Group Hug

A Production Network

Absolutely nothing is standing still at The Pinewood Group. Teddington, Shepperton, and Pinewood are moving as one to secure a healthy future for an original media city… PAUL MAC talks to Robin O'Donoghue.

The Pinewood Studios Group is currently made up of three separate sites – Teddington Studios, Shepperton Studios, and Pinewood Studios. All three have extensive independent media-based histories – with Teddington's stretching back over a century from the very beginnings of film production. It wasn't until 2005 that they became a trio under the Pinewood Studios Group umbrella, and now enjoy increasing co-operation, collaboration, and market share. With an eye to the future, the 'Project Pinewood' scheme is in an ongoing public consultation and design phase – facades of world city-scapes combined with a large residential/business premises development might mean that a media-type could live in New Orleans, go to work in Amsterdam, and stop on the way back for a beer in a Tudor market place.

Between them the three studio sites currently offer 34 sound stages, ten television studios, possibly the best water filming facilities in Europe, comprehensive post production facilities (including ten theatres and two ADR/Foley suites), over 280 independent companies (most directly servicing the film and TV industries) and many acres of back-lot for set construction.

I met up with the Pinewood Group's Head of Post Production Sound, Robin O'Donoghue, himself a Re-Recording Mixer with more high-profile credits than seems fair for a single lifetime. He is now responsible for the audio post team, the ongoing development of audio post services in the group, and is an active advocate of both what the Pinewood Group can offer prospective clients, and what the UK film and televisual industries can offer the world.

The Group Deal

We began by discussing the 'group deal' and the importance of flexibility in its success. "In the early days it was still very much separate pockets," he explained. "Slowly, certainly in the last three years, there's been much more cross-fertilisation. I have six high profile mixers and, like myself, a mixer likes their own room and their own support staff. But in the modern environment it's much harder to do that…

"…Often the first thing chosen nowadays by a Producer or Director is where they want to mix. Initially, is it London, or out at Pinewood or Shepperton – then is it Pinewood or Shepperton? Where can we fit them in?"

For example, a client might be offered the Korda Theatre [Shepperton] – a top-spec mixing room. If that is outside the budget, O'Donoghue can offer Theatre 1 at Shepperton. He can then offer a choice from a long roster of respected Re-Recording Mixers (Mike Dowson, Ian Tapp, Brendan Nicolson, Richard Pryke, Richard Street, Paul Govey). "Now, say, they are in Theatre 1 at Shepperton with Paul Govey," continues O'Donoghue. "We supply the effects mixers and the support team of mix techs and runners… Maybe as they come up to the mix, the Korda Theatre's empty. I'm quite happy to upgrade them." There are many other options open to O'Donoghue ▸

DPA 5100 MOBILE SURROUND MICROPHONE

You're surrounded!

w w w . d p a m i c r o p h o n e s . c o m

Can't believe that a stealthy 5.1 microphone like the DPA 5100 can be so sonically arresting? You should--it's a brilliant tracking device. Chalk it up to yet another thrilling capture by the Danish authorities.

For a full briefing on the rest of our arsenal--dominating engineers' Most Wanted lists around the globe--contact the professionals at DPA.

DPA MICROPHONES

– the Powell Theatre (renamed from Pinewood Theatre 1), for example. Sometimes a particular site will fit better with a Director's home location, or other services that the company is using. The point is that this mix-and-match approach works well for clients but requires mixers and support teams to be flexible and not get too precious about a particular room.

Quadruplets

To aid this kind of adaptability, the Group now has four Euphonix System 5-F consoles in the four main theatres – two at Pinewood, and two at Shepperton. All four consoles are dual-operator System 5-F systems, each with 480 DSP channels, 48 channels of analogue I/O, 224 channels of AES I/O, and 24 MADI I/Os. The only spec that separates them is the frame size. The Powell Theatre (Pinewood) has 64 faders; Pressburger (Pinewood), 48; Korda (Shepperton), 72; and Theatre 1, Shepperton, 64. All four systems are now equipped with EuCon Hybrid for extensive, multiple DAW control over Ethernet, and the latest version 3.0 eMix software.

"Going back five years," explains O'Donoghue, "we took the plunge and bought the first Euphonix [digital] desk in the country – a big System 5 in the Korda Theatre. That proved instantly successful. On the back of that, a year later we bought another one for Theatre 1."

A short while after, the fate of the two main Pinewood consoles had to be considered – a Harrison Series 12 ("…lovely desk, but it had run its course and needed upgrading"); and an AMS Neve DFC ("great desk, but again needed money spending on it"). Thus, late last year the fourth Euphonix install for the Pinewood Group was announced. According to O'Donoghue: "We're now one studio. If you're running one studio… you would probably endeavor to have the same hardware – for support, spares, maintenance, and mixers moving from room to room… We can all mix, but it's much tougher to mix on a desk where you don't quite know where the EQ is, or the routing is…

"It's no reflection at all on Harrison or AMS Neve who had supported us fantastically well, but Euphonix had stolen the march on them five years ago. One thing I loved about the Euphonix was the feedback from the screens… The build, the quality of the sound, the number of tracks they can handle, a truly assignable board. We hung our hat on that and it was very difficult to justify going to another."

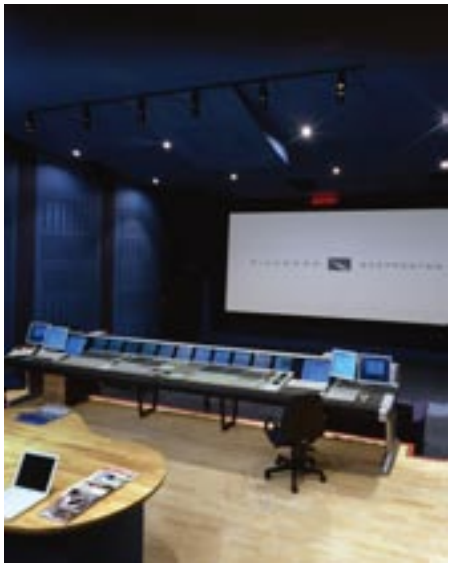
Teddington Studios, on the other hand, which had its own mixing theatre some years ago, was destined for another business tack. It was decided that TV was the Teddington way, and now plays host to a variety of TV stages and channels. Smaller stages are rented out on a yearly basis to projects such as the Poker Channel, a horse racing channel, and a Chinese channel. "It's a nice business," says O'Donoghue, "because it's contracted and fixed – known revenue for a known period of time."

The two main TV stages are also seen as a complement to the two TV stages at Pinewood – most recently associated with *The Weakest Link, My Family, The Lily Allen Show, Gladiators,* and more. The point here is that these are purpose built. "You could go in there and switch on, whereas at Shepperton you'd have to bring in OB trucks and all that – more a dry hire space.

Production Bundle

Overall, the Pinewood Group is dedicated to being an all-encompassing media service provider, and achieves that not only through its own resources, but also those of its tenants. The title 'Media City' is being coined all over the place at the momemtn, but the Pinewood Group is among the originals – still creating new partnerships and doing bigger, better deals.

A recent example of that is the production of a recent flagship BBC period drama, *Little Dorrit* (from the Dickens story). The Pinewood Group collaborated with its tenants and partners to provide a one-stop shop for the project – not just for post, but for shooting and finishing as well. The filming was done on Pinewood stages and a back lot set. The picture editing equipment was supplied through Hireworks; a new partnership with Molinare in Soho (screens and control in



Pinewood, material/masters/hardware at Molinare via SohoNet) took care of the grading and visual effects; SonicTracks was subcontracted to do the sound edit; the Foley was done in the main Pinewood Foley studio, and then a Pinewood mixer, Ian Tapp, did the audio mix in a Pinewood theatre.

"We're rather thrilled about it," says O'Donoghue. "It's the first real instance of the Pinewood Group doing a package of everything… It's an attraction because the producers know it's one price – unless they deviate massively from the original time allowed." O'Donoghue is patently proud of this latest 'bundle', which he explains was only possible because he now has an environment filled with media services that he can recommend and that will not let the client down.

This one-stop-shop approach, derived from the new, improved co-operation both between sites around the Pinewood Group and with its resident companies is, in part, an antidote to the Soho-effect. The 'out-of-town' studios have a suffered over recent times because of the accessibility of services inside the Soho catchment, first driven by a powerful

INST
MIC
TUBE STAGE
ON
DRIVE
PEAK
INPUT GAIN
TUBE WARMTH
OUTPUT GAIN
Ice Cool Looks
Discrete Class A Electronics Plus Tube Warmth
All Ebony Series feature tube stages with variable drive in addition to the discrete Class A circuitry putting you in total control of how 'warm' or how 'cool' you want the sound.
From £499 ex vat.
tlaudio.co.uk
TL Audio
PASSIONATE ABOUT TUBES
ebony
series
A1 Discrete Class A and Tube Dual Preamp / DI
A2 Discrete Class A and Tube Stereo Processor
A3 Discrete Class A and Tube Mono Channel Strip
NEW
A4 Discrete Class A and Tube 16:2 Summing Amp

ROCK SOLID-STATE

Compact flash is swiftly becoming the new industry standard for solid state recording. A quick look at the benefits of Compact flash can tell you why. Since there are no moving parts this makes it extremely reliable. It's a universal standard which allows for quick transfer to and from PC/Mac. With its capacity it allows for higher than CD quality recordings and far greater record times. Its compact and robust meaning your files are on a secure medium. Since it is read/write capable this allows for editing after a recording.

The SSR1 is a simple to use high quality solid state recorder. With Balanced In/Out and Digital In/Out this makes it ideal for studio, live & mobile installations. Both the SSR1 & SSCDR1 Offer all of the same editing & Auto Cue/Ready features of our Minidisk machines plus higher quality (broadcast standard) 24 bit 48k recording. The SSR1 is a space saving 1U with both parallel and RS232 connections for remote control and a Keyboard connection for titling. This makes it an ideal unit for all your recording and playback needs.

The SSCDR1 is the only available 1U standalone professional CD recorder by TASCAM. As well as being space saving the unit gives the reliability of solid state and the convenience of Compact Disc. The SSCDR1 allows you to record to Compact flash then transfer to CD or vice versa. Any CD can be ripped onto the compact flash card in MP3 or Wav format. This makes the SSCDR1 great for archiving CD's into Wav or MP3 format. Standard Mp3's can be transferred onto a compact flash card then setup as a playlist for play out purposes or burning onto CD.

The HDR1 offers direct to compact flash or USB recording. Both line level and Phantom powered Microphones can be recorded without the need for external pre amps. The HDR1 has a ducking function to allow for announcements to be made while music is being played back by the unit. The Ethernet port allows remote operation of all functions as well as being able to retrieve any files or send files to the unit using standard File Transfer Protocol.

For further information call
Gary on 01923 438845 /
e mail info@tascam.co.uk
or visit www.tascam.co.uk

The RC SS20 is the perfect addition to the SSR1, SSCDR1 & HDR1. On the SS models this remote enables the use of the flash start feature which allows for up to 20 tracks to be triggered instantly. This makes the remote ideal for jingle play out or instant play of any track in a playlist. When connected to a HDR1 up to 16 tracks can be triggered all from a wired remote that can be up to 10 meters away!

TASCAM
TEAC PROFESSIONAL

commercials industry and compounded with larger-than-the-norm mixing theatres pulling work into London.

The basic size of a theatre is also something O'Donoghue sees as a major asset to Pinewood, as even the biggest theatres in Soho don't match the group's facilities. And while many productions have been willing to sacrifice size, it's still an area that he argues as crucial. "If you have a lot of experience, knowledge, and understanding of the whole system, and certain references that come from experience, you can probably mix anywhere. But if you don't, you're going to misjudge it massively.

"In a small room the stereo image is much wider. When you pan something to the left it can seem too wide so you pan it in a bit. You equalise a line of dialogue and think, 'that's nice and bright, great, leave it alone'. You play the music in; it sounds beautiful – fine… You then take it to a big theatre and straight away you'll think you haven't panned enough and where has all that lovely crisp presence you had gone; the reality is you are now listening to speakers 50 feet away."

One symptom of this is the phenomenon that O'Donoghue terms 'dipping into these wonderful facilities'. A film might have a long run at a mix in London, but then be relocated to Pinewood to do the print master and final checks. Obviously business is business, but it's also understandably slightly galling when a theatre chosen as the final and ultimate reference is not chosen as the venue for the bulk of the work. O'Donoghue: "If a good Mixer from London came out here and mixed a whole film, he'd end up with a better sound track."

The counter argument is one that O'Donoghue is well placed to refute – mainly because he does a lot of the deals: price. He says that an expensive, elitist image of Pinewood is something he has worked hard to dissolve. He has a bucket full of anecdotes that mainly revolve around productions that have chosen alternative facilities based on the assumption that they couldn't afford Pinewood or Shepperton – productions that now come to the Pinewood Group for their regular output. "I'd rather have people mixing here," states O'Donoghue. "I do a special deal for students and short film makers. I don't do anything for free, unless it's for a charity..

"What I'm bringing is flexibility. We listen, we're flexible, we help young film makers and this flexibility follows through to the medium and larger budget films. Some of the great films we have mixed have spent as long as twelve weeks and as much as £250,000 on the soundtrack which enables us to maintain these wonderful facilities.

O'Donoghue talks of the environment of Pinewood or Shepperton – the big theatres, the incredible on-site resources and facilities, and the infrastructure.

Day To Day

Robin O'Donoghue's job now revolves around keeping the audio post production departments and teams in Pinewood and Shepperton running efficiently, creatively, and almost automatically. He talked of differing work-ethics at Shepperton and Pinewood – historically he says that Shepperton was more 'free-spirted'. That is, staff were more self-sufficient, with lead mixers often dealing with their own customers directly. "You didn't have to book customers for Ray Merrin when he was working here – it all just happened," he explained. So one objective is to continue injecting spirit into the work ethic across the group – not necessarily renegade spirit, but 'self-fulfilling', and 'self-managing' spirit.

O'Donoghue is also involved in refurbishments, re-purposing, and (in some cases) resurrection of spaces at the facilities. Some are being rented out to producers, companies, and others, while there's a plan in the works to rejuvenate an ADR/Foley suite. While I was there we visited a very new Apple reseller and training facility now on-site and operating inside the Pinewood community.

And perhaps most importantly, he is often directly involved in client deals. He can draw on immense experience at the console and in the studios to help create the right package for every client at (almost) the right price. "There's something odd about the film industry," he muses. "No other business, no hotel, no other service business is like it. Who goes to a hotel desk and says 'I'd like to book your penthouse suite please but I've got no money'?

"I've taken great delight in the last few months saying, "I'm afraid we're fully booked. I'm afraid that's the rate." The reality is though that that's a rare situation these days. It's a buyer's market and the Pinewood Group has to compete on both price and quality for continued success.

Investment in sound post production facilities at the Pinewood Group has not been meager. Four large-scale Euphonix System 5-Fs over three years is not a small consideration. And there's plenty of ongoing refurbishment to keep the place fresh and competitive. Possibly more significant is that that they are changing the way they do business – in the customer's favour.

INFORMATION

Ⓦ www.pinewoodgroup.com

STUDIO IN A BAG

Zaxcom's Fusion is the perfect location sound solution for multi-track high resolution recording, mixing and effects processing of sound for picture.

TESTIMONIALS

"The specific demands of our show require in bag solutions. 8 iso tracks with in-line (signal) processing provides more flexibility. All Compact Flash recording means no moving parts. The Fusion is perfect for us.
Steve Jones, Sound Supervisor
"Extreme Makeover: Home Edition"

Easy, logical, powerful, solid state - no more hard drives! 8 discreet channels of beautiful digital audio in my mixing bag!
Tomm Dauenhauer, Audio Supervisor
"Snoop Dogg's Father Hood"
E! Entertainment TV Productions

Fusion is the solid state way ahead – it offers me the vast inputs, and extensive outputs, of the existing Deva recorders, plus the incredible ability to record without moving parts. I can make primary and back up recordings in real time, whilst enjoying the known and trusted touch sensitive user interface that I am used to from being a Deva user. This is more than a recorder, and much more than a mixer. It is a mixer/recorder par excellence.
Simon Bishop, Production Sound Mixer"

FEATURES

- Intuitive touch screen interface
- 8–track dual Compact Flash recording capability
- Lightweight design
- 8 mic/line inputs with 48V power
- 4 AES input pairs with sample rate conversion
- 16 x 16 digital mixer with prefader/post fader assign
- Effects include: EQ, notch filters, compressor and delay

Zaxcom

Fusion starts at $7,995

To learn more visit www.zaxcom.com

S5 FUSION

Makes Perfect Sense

"We wanted a console with the sophistication our clients and projects are now demanding but at a price point that makes sense for TV. Using Pyramix as our house DAW system, with which we mix "in the box" for many projects, we needed a console that would integrate seamlessly with this platform. This is one of the delights of the S5 Fusion,"

-Richard Sillitto, Senior Dubbing Mixer, 2nd Sense, Elstree Studios

Pictured: Theatre A, 2nd Sense, Elstree Studios

Call Now on 020 8561 2566 to book your SOHO DEMO Jan 19th -30th

S5 Fusion

Euphonix S5 Fusion was designed to meet the specific needs of TV stations and audio post houses transitioning to HD and surround sound programming. A professional mixing package, the SF Fusion fuses Euphonix' new digital signal processing SuperCore engine with high-speed Ethernet EuCon™ control protocol. The powerful combination enables the S5 Fusion console surface to simultaneously control its own DSP as well as tracks from multiple external DAWs.

20 YEARS Euphonix

euphonix.com

Euphonix

©2008 Euphonix, Inc. All Rights Reserved. | Newport Road, Hayes | UB4 8JX, UK | Phone: +44 (0)20 8561 2566 | Fax: +44 (0)20 8589 0766

2008 has been a bumper year of product launches – some filling a price point, some filling a need, and others innovating and creating a place where there wasn't one before. We've collated the views of AM editorial, contributors, and the ravings of many others into a list that we're sure will tickle everyone's fancy in one way or another. Whether you're looking for something to do with your Christmas bonus (Christmas what?) or simply want a year's worth of product highlights. This is for you.

AKG C214

According to Product Manager Thomas Stubics, AKG Acoustics' C 214 "... was designed as a budget-friendly alternative to the leading-edge C 414 family. As the C 214 uses the same one-inch diaphragm as the C414, the essence of that heralded C 414 has been captured in this newest model." The C 214's road-toughened construction is based around a dent-resistant metal grille that ensures high RF immunity without affecting performance, plus a gold-plated XLR-type output.

www.akg.com

EDITOR'S COMMENT

"This is definitely a 'why-didn't-they-think-of-this-sooner' product. The C 414 is a core tool for many people, and the option of a lower price for just the cardioid response makes it more accessible."

Allen & Heath ZED R-16

The ZED R-16 represents Allen & Heath's first dedicated recording mixer in over a decade, and effectively combines an analogue mixer with a FireWire audio interface and 'home studio' routing for building tracks. Features include 16 mono and two stereo inputs, dual mic pre-amp, four-band fully parametric EQ, four auxes, two stereo returns, plus 18+18 FireWire I/O and 8+8 ADAT I/O.

www.allen-heath.com

"As an analogue mixer it is robust, quiet, and transparent and, as a controller, straightforward. The digital routing is very flexible and marries the analogue and digital worlds together very well."
(Simon Tillbrook, Audio Media, Oct 2008)

EDITOR'S COMMENT

"When I first saw this console, I hoped it was a return to the early successes of Allen & Heath's recording/studio consoles. It seems to have surpassed those, and brings a solid, high quality, bundle of analogue channels, plus DAW control and interfacing to a market where complications can be overrated."

Cakewalk Sonar V-Studio Package

Cakewalk's Sonar DAW package is a popular choice for Windows-based music production, and the Sonar VS-700c V-Studio console is designed to offer those using it an integrated hardware-based solution for editing and mixing. Featuring DV-7/V-LINK compatibility, the VS-700c allows the user to adjust plug-in parameters along with other more traditional channel-based controls such as pan and mute. The console's unique T-Bar control can be used for surround mixing, while the nine touch sensitive faders, a rotary jog wheel, LED displays, transport controls, and an extensive monitoring section including two independent headphone outputs, allow the V-Studio to become the centrepiece of the Cakewalk-based studio.

www.sonarvstudio.com

EDITOR'S COMMENT

"I went to a demo of Sonar 8 and the new VS-700c controller, and emerged surprised that there was so much in it."

Celemony Melodyne 2.0

One of the biggest hits of the 2008 Frankfurt MusikMesse was the demonstration of the upcoming version 2.0 of Celemony's acclaimed Melodyne software, which incorporates its new Direct Note Access technology (DNA). This will allow users to edit individual notes within polyphonic audio material by changing their pitches, key, and position. If the software works as well 'in the wild' at extracting individual performances as it did when demonstrated with a Chet Baker tune at Frankfurt, expect a plethora of summer hits featuring the vocal delights of long deceased classic crooners. Anyone buying the Melodyne plug-in after March 12 automatically qualifies for a free Version 2 upgrade when available – which is now likely to be early 2009.

www.celemony.com

EDITOR'S COMMENT

"After MusikMesse several people asked whether Melodyne DNA was a real product or a late April Fool. DNA could be one of the most significant new technologies in our industry for some time."

DiGiCo SD8

DiGiCo's SD8 console brings the super FPGA floating point technology used in the company's ground breaking SD7 at a lower price point. The compact frame hosts a powerful array of live sound tools, and the stage MADIrack has 48 mic inputs as standard, eight analogue outputs, and dual MADI. There's also a digital MADI multicore and eight line outputs that can be reconfigured for monitoring, while the Stealth processor allows up to 120 internal channels to be processed for large numbers of inputs with EQ and dynamics.

www.digico.org

EDITOR'S COMMENT

"FPGA technology is finding footholds in several areas of our industry, and SD8 is the latest exponent. Technology shouldn't be the deciding factor in product choice, but consequences – more power, lower price – could be."

DPA 5100

The DPA 5100 is a compact 'plug and play' surround microphone for 5.1 audio capture. Employing five miniature pressure transducers, the microphone has extremely low sensitivity to wind and mechanical noise, alongside low distortion and consistent low frequency response and large dynamic range. DPA's proprietary DiPMic (Directional Pressure Microphone) technology preserves level matching between the discreet analogue output channels, as well as channel separation and directionality. The lightweight and portable mic can be mounted on a camera or microphone stand, suspended or handheld, while the robust build quality is also highly resilient to inclement weather conditions.

www.dpamicrophones.com

EDITOR'S COMMENT

"A surround microphone that does everything for you? The 5100 is another design triumph from DPA, simultaneously winning the prizes for 'simplest route to surround' and 'most overdue use of cardioids in the front of a microphone array'."

Earthworks PM40

Earthwork's PM40 High Definition PianoMic System mics are designed to be placed within the sound field of the piano rather than the more traditional 'free field' position. Designed to pick up sounds uniformly, whether they arrive at the front, the sides, or the rear of the microphone, the PianoMic System achieves much of its remarkable performance through the use of specially designed, 40kHz random-incidence High Definition Microphones.

www.earthworksaudio.com

"The clarity and versatility of the PM40 is second to none and will surprise the most experienced of engineers."
(Simon Allen, Audio Media, February 2008)

EDITOR'S COMMENT

"Reports of the PM40 advantage have been travelling swiftly by word of mouth. So with engineer endorsement anecdotes flying, it would be irresponsible to ignore it.

Editrol R-44

Edirol's R-44 is a compact solid state four channel field recorder housed in a sturdy compact package. Its almost silent operation, ability to capture up to four channels of uncompressed audio with selectable bit depths and sampling frequencies directly onto SD or SDHC cards means it should find many uses in the portable recording world.

www.edirol.net

"What you really need from a four-track recorder is good pre-amps, reliable metering, and easy access to the result – and that's what you get."
(Paul Mac, Audio Media, July 2008)

EDITOR'S COMMENT

"The R-44 is one of those products that points out the obvious answer when everyone else is following the herd. Great four-track recorder at a price that puts some of the two-trackers to shame."

Euphonix Artist Series

Euphonix's new Artist Series line of Ethernet-based DAW controllers was certainly the talk of the hi-tech contingent at the NAMM Show – and rightly so. Available in two flavours, the MC Mix offers eight faders, channel control buttons, rotary encoders, and OLED displays, while the MC Control has only four faders but with the addition of a large colour screen with encoders and user-definable buttons, transport control, and more.

www.euphonix.com

"The MC Mix is focused on faders, but there is enough extra that you can navigate your session, play with plug-ins, and so on without a problem. Add in the four faders, transport, and a display with much potential, and the MC Control can easily be a standalone 'do everything' unit."
(Paul Mac, Audio Media, April 2008)

EDITOR'S COMMENT

"Euphonix took an admirable route to this product line – get the protocols right, work closely with the third parties, make a high-end product and get that right, then produce a product that benefits from that foundation for a bigger market. Possibly the first inexpensive and comprehensive third-party control solution that talks the DAW's language fluently."

HHB DualBurn CDR-882

HHB's DualBurn CDR-882 Dual Drive CD Recorder's genuine REC-REC drive configuration, supports seamless extended recording times across two or more discs, simultaneous recording off two discs and high-speed duplication. The unit is suitable for a wide range of professional applications, including broadcast, music production, live sound recording, and duplication.

www.hhb.co.uk

EDITOR'S COMMENT

"Breaking out of the time constraints and lack of redundancy imposed by the more ordinary recordable CD hardware is a great way of extending the life of this format in the professional arena."

iZ Technologies ADA

The iZ Technologies ADA is a high-end, multi-channel unit featuring A/D and D/A converters that the company claims, "brings the rich purity of analogue recording to the world of workstations." Featuring iZ's well-respected converters, an innovative modular I/O structure, intuitive touchscreen controls, and direct interfacing to native DAWS and Pro Tools, the ADA should provide a high quality front-end for capturing analogue sources.

www.izcorp.com

"The only question that pops into your mind is: Why has it taken so long for iZ to put these converters into a stand-alone unit?"
(Simon Tillbrook, Audio Media, Nov 2008)

EDITOR'S COMMENT

"Pretty much the first thing that anyone says when they mention their RADAR is 'great converters'. It's taken a while, but making those converters available without the rest of that recorder must be one of the most requested product developments in recent times."

Lexicon PCM96

Lexicon's slick-looking PCM96 represents its latest pro effects processor in either stereo or surround versions. As such, following in the footsteps of the legendary PCM60 and PCM70, the PCM96 offers a comprehensive selection of classic Lexicon reverbs and effects, including the Concert Hall reverb, together with more modern innovations like the Hardware Plug-In feature, DAW automation dual Ethernet and FireWire connections, and more.

www.lexiconpro.com

"The classic bloom of reverb that comes from every algorithm is quite definitely amazing and something to behold if you've never used a high end reverb before. In any application, the PCM96 provides versatility and sound that is unmistakably Lexicon."
(David Helpling, Audio Media, October 2008)

EDITOR'S COMMENT

"Many people have suggested that this unit might be a return to the kind of quality and sweetness expected of Lexicon over the many years it has been designing delay and reverb processing, but at a lower cost. The surround version, especially, will be one to watch."

Mercenary Audio KM-69

Mercenary Audio's MFG KM-69 microphone was born as a modern replacement for the hard-to-come-by classic Neumann KM-84. Mercenary says the microphone is very close to the KM-84, but has been tweaked to give 'a tad better clarity and detail without sacrificing depth, making it a stunner for acoustic instruments. It was given a little more air on top, and the sound was carefully balanced so as not to take away from the subtle richness and 'velvet' sound'.

www.mercenary.com

"If you are looking for clarity and presence of the highest order, this is one of the microphones you can reach for without breaking the bank."
(Andrew Graeme, Audio Media, Nov 2008)

EDITOR'S COMMENT

"It was clear from the review that, more than simply another vintage copy, the KM-69 is an excellent microphone in its own right. What price do you put on confidence in your tools?"

Merging Technologies ADR Module

The new package for Pyramix from Swiss-based Merging Technologies is described as the ultimate total solution for ADR, Foley, and Foreign Dialogue Replacement. It has customisable audible and visual countdowns, wipes, and even GPI/Os for triggering external cue lights and so on.

Installed in a single custom chassis with the option of GPI/Os, a dedicated custom keyboard, and Merging's Isis edit controller and fader extension unit, it effectively replaces the need for a separate mixing console.

www.merging.com

"The new ADR package for Pyramix is one such special item, designed from the ground up to make the dialogue replacement or Foley session preparation and operation as easy as it can be, but as flexible as it needs to be."
(Paul Mac, Audio Media, June 2008)

EDITOR'S COMMENT

"While it's not 'whole' without the complete system, the ADR Module for Pyramix has to be one of the great workflow assets to emerge this year. Anything that takes the pain out of long dialogue sessions has got to be worthy of note."

Midas PRO6

The PRO6 Live Audio System is a digital audio system from Midas. Employing technologies developed from the XL8, the PRO6 offers the same exemplary audio performance in a compact package. The PRO6 standard system comprises a Control Centre and only two 7U 19" rack units. It can provide up to 80 simultaneous input processing channels, and up to 32 (+3) discrete mixes in monitor mode – all of which feature EQ and a choice of many dynamics processing options. By adding additional I/O hardware the PRO6's network can be expanded up to 264 inputs and 264 outputs.

www.midasconsoles.com

"Quote here from Dec '08 Issue."
(Simon Allen, Audio Media, December 2008)

EDITOR'S COMMENT

"Much is expected of any Midas console, and if the performance of the XL8 is anything to go by this new offering will fit in very nicely. The backbone is inherited from the XL8, as are the control, connections, and ergonomics. The genetics of technology in action."

Olympus LS-10

Olympus' new LS-10 Linear PCM Recorder is a pocket-sized unit with 2GB internal memory along with a SDHC Card slot. It ships with Steinberg Cubase LE, and offers up to 24-bit/96kHz sampling rate and PCM recording (WAV/WMA, and MP3 formats in Normal, Wide, and Zoom modes). The LS-10 comes complete with a carrying case, USB cable, audio cable, and two mic windshields.

www.olympus.co.uk

"The LS-10 is a great little tool for just about anybody who records – whether it hangs out in your top pocket waiting to be useful (and it will be) or whether it stays glued to your palm as you roam."
(Paul Mac, Audio Media, May 2008)

EDITOR'S COMMENT

"Olympus makes a lot of handy recorders, but this is the first that will make it in pro-audio. To a large degree the manufacturer has shown many other pretenders how it should be done."

RØDE NTG-3

RØDE's NTG-3 Precision broadcast-grade shotgun microphone is the result of years of development by the company's engineers. The microphone is almost completely resistant to moisture, and is robust enough to become a useful tool in the A/V field.

www.rodemic.com

"In virtually silent rooms the amount of hiss was very low indeed and in one location the directional pattern of the NTG-3 reduced the amount of reverb and echo to acceptable levels. After just a few weeks of use, I'd rate it as an essential bit of kit."
(Jerry Ibbotson, Audio Media, Sept 2008)

EDITOR'S COMMENT
"Yet another product that has taken the grapevine by storm. The curse of shotguns is that they are either not good enough or too expensive (or both). It seems that Røde has come up with the antidote."

RSS S-1608

The Roland RSS S-1608 Digital Snake is a compact version of the popular S-4000 system. The company says that it's easy to use and quick to install, and it's a small format solution that offers the highest quality audio signal in a portable snake system for users – essential for those that need the best possible sound quality from their audio without the high frequency losses and bulk of an analogue system.

www.roland.com

"As far as the sound quality goes, I am really pleased to report that it is superb. There wasn't a great deal of difference between the analogue and digital snakes, which is good news. "
(Simon Allen, Audio Media, March 2008)

EDITOR'S COMMENT
"Simple is almost always superior. Plenty of channels, easy to set-up, and no multicore. Since when was connecting things so straightforward?"

SE Electronics RNR1

The latest love-child from sE Electronics's affair with Rupert Neve is the RNR1 Active Ribbon Microphone. According to sE the 'RNR1 mic has all the qualities which engineers love in the very best ribbons… warm and silky lows, and incredible depth and air to mid frequencies, but with a clarity and impact in high frequencies that reveals vital harmonic information normally missing.' The Microphone's revolutionary performance comes courtesy of a unique blend of discrete circuits and purpose-designed transformers from Rupert Neve, and the best capsules and chassis design that Siwei Zou and sE have to offer. The microphone utilises Neve's discrete single-sided circuits and custom designed transformers based on those already implemented in Neve's 5088 console.

www.seelectronics.com

EDITOR'S COMMENT
"No-one I know has heard it yet, but based soley on the words 'Rupert Neve' and 'SE Electronics', we have a right to expect something very special..."

Sennheiser MKE 1

Sennheiser's MKE 1 miniature 3.3mm-wide clip-on microphone offers outstanding sound quality; with plenty ►

Colourless. Clean. Transparent. Smooth.

CMS Active Nearfield Monitors from Focal Professional

Based upon Focal proprietary driver technology, the new CMS 65 and CMS 50 simply offer outstanding performance and exceptional versatility.

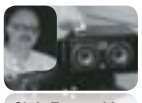
We could bore you with the superbly finished aluminium die-cast cabinets which offer unconditional rigidity, the internal damping and bracing which banishes unwanted colorations, or the unique Al/Mg (aluminium/magnesium) inverted dome tweeter which easily extends up to 28kHz at -3dB, with a close to perfection pulse response.

But you probably just want to know how they perform. And how much they cost.

Brilliantly. And less than you think.

Focal Professional Users

Del Palmer
Kate Bush
- uses the Solo 6BE



Chris Tsangarides
Judas Priest, Black Sabbath, Tom Jones
- uses the Twin 6BE

Sean Genockey
Manic Street Preachers, Kula Shaker, Tom McRae
-uses the Solo 6BE

Distributed by SCV London: Call 020 8418 1470 for your nearest dealer
www.scvlondon.co.uk

of lower midrange and excellent presence with good speech intelligibility. Sennheiser has taken particular care to ensure that the microphone capsule is fully protected from moisture – especially important when the sweat breaks out during a live performance! The clip-on microphone can be fitted with a multi-purpose cap that diverts any humidity past the microphone and also doubles as a windshield. Further protection comes from a thin, acoustically open stainless steel membrane that protects the capsule. The mic is omni-directional, and picks up mostly direct sound with relatively little ambient noise.

www.sennheiser.co.uk

EDITOR'S COMMENT

"I know it's stating the obvious, but this microphone is very, very, very small. As such, it will be very, very, very useful."

Smart AV Tango

Smart AV's Tango is a touch-screen DAW controller that features the company's ingenious ARC channel selection technology. Eight touch-sensitive faders, plus a plethora of encoders and buttons, should minimise the need for a keyboard and mouse. Eminently flexible, the expandable Tango's new lower price point should enable many more users to experience the company's obsession with ergonomic design.

www.smartav.net

"The Tango is a compact, well specified and considered controller that should find a lot of friends in the post production and mixing world, and also as a useful addition to the composer's armoury."
(Stephen Bennett, Audio Media, July 2008)

EDITOR'S COMMENT

"Smart AV pioneered collaborations with DAW manufacturers to make its range of controllers as tightly integrated as is feasible. Together with an operator-in-mind approach to ergonomic innovation, the Tango is a professional choice."

Solid State Logic Matrix

The Matrix is the latest in the range of DAW controllers from Solid State Logic (SSL), designed to integrate the analogue part of your studio with your DAW and, if you're using SSL's X-Rack processors, allow for instant recall of your hardware settings. The Matrix sports 16 touch-sensitive faders in a compact package that brings SSL's SuperAnalogue technology within the reach of many more facilities.

www.solidstatelogic.com

"The ability to easily integrate your analogue rack units, simple switching of control from analogue to DAW, and between DAWs, I only needed about an hour to be running the SSL Matrix as if I had been with it for considerable time."
(Simon Tillbrook, Audio Media, Sept 2008)

EDITOR'S COMMENT

"How to bring up-to-date analogue to a world now fluent with digital possibilities; and how to make legendary circuits play nicely with a DAW."

Sonnox SuprEsser

Sonnox's SuprEsser is a fully featured de-esser, as well as a capable dynamic EQ. Quick fixes can be performed using a simple mode, but for more detailed processing, an advanced mode enables fine-tuning. An intuitive FFT display and three listen modes enable the offending frequencies to be carefully carved out. 'Plosives' and other annoyances can also be removed effortlessly, making it more than a simple de-esser.

www.sonnoxplugins.com

"This is the sort of area in which software excels, and the ease of use and quality of the results obtainable means that it'll be no time at all before it pays for itself in a busy studio."
(Stephen Bennett, Audio Media, April 2008)

EDITOR'S COMMENT

"The SuprEsser is prime Sonnox material. Take a process that you may have taken for granted; helpfully point out that it can be done much, much better... Then prove it."

Soundcraft Si3

Soundcraft has revisited the control topology employed on the ground-breaking Spirit digital consoles to create the Soundcraft Si3. Designed for live use on both touring and fixed installations, its Virtual Channel Strip can be set to control every function of a channel as if you had a normal analogue channel strip laid sideways in front of you.

www.soundcraft.com

"Snapshot automation, preset, and user definable keys round out the Si3's capabilities. It's a console bridging the simplicity and familiarity of an analogue console with the power and flexibility of digital."
(Frank Wells, Audio Media, September 2008)

EDITOR'S COMMENT

"The main difficulty with the analogue/digital debate is that there is a debate at all. You should be able to forget the technology and focus only on whether a product is fit for purpose. Soundcraft has probably got nearer than anyone else in the SR console field to the mythical 'digilogue' product."

Sound Devices 788T

Sound Devices' 788T is a powerful eight input, eight-track digital audio recorder designed for production sound. Developed using the company's proven 7-Series architecture, this latest device can record via its fully-featured analogue inputs to several different recording media, including FireWire-based and internal hard drives and Flash-based media – all in a robust and compact package.

www.sounddevices.com

"This is one of those rare devices. Whether you're running as a highly mobile 'bag' operator, or have the 788T on a cart, this is a seriously good sounding, stable recorder."
(Ty Ford, Audio Media, October 2008)

EDITOR'S COMMENT

"Any piece of equipment that lives up to Sound Devices' reputation for both sound and build quality cannot be left off a gear-picks list. It's mere coincidence that this is an eight-channel Sound Devices recorder."

TC Electronic Powercore 6000

TC Electronic's Powercore 6000 makes the company's renowned System 6000 algorithms available for use in your DAW. Eight Freescale DSPs ensure tight integration into the native world, while maintaining all of the advantages that hardware offers for pristine signal processing. TC Electronic claims that 'this ensures the same high quality of processing as you're used to from the hardware world.'

www.tcelectronic.com

"For project studios and smaller facilities, the P6000 has a lot to offer. If you're mixing in the box, you get a collection of polished processors and the power to run enough instances to spread them around liberally."
(Richard Wentk, Audio Media, Nov 2008)

EDITOR'S COMMENT
"This is 'most' of a System 6000 in a bundle with a FireWire connected hunk of DSP. In that light, the price comparison with a full-on System 6000 hardware version shines brightly in favour of the DAW-connected son-of-6000."

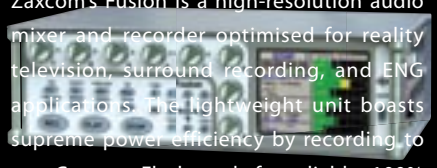
Universal Audio UAD-2

It's been a long time coming, but Universal Audio's UAD-2 DSP based plug-in effects processor massively leapfrogs the previous generation's processing power with a card featuring a single, duo, or quad configurations of Analog Device's latest generation SHARC 21369 floating-point processors. Boasting a performance upgrade of up to ten times the UAD-1 performance, it will run more of UA's high-quality emulations at sample rates from 44.1-192kHz, while the new live mode means the effects can be used for tracking as well as mixing and mastering. Both generations of DSP cards can be used in tandem, with the software automatically allocating resources, and up to four cards can be mixed and used in a single computer.

www.uaudio.com

EDITOR'S COMMENT
"Seeing a complete AMS-Neve analogue console emulated on a small DSP card is something of a wake-up call. For big power and great plug-ins, the UAD-1 deserves to be on this list."

Zaxcom Fusion



Zaxcom's Fusion is a high-resolution audio mixer and recorder optimised for reality television, surround recording, and ENG applications. The lightweight unit boasts supreme power efficiency by recording to two CompactFlash cards for reliable, 100% solid-state efficiency by recording to one card in the mobile audio recording format – which allows audio to be recovered if power is lost during recording, while the other receives a redundant copy of the files.

www.zaxcom.com

"The wisdom and experience that nearly 12 years of Deva development Zaxcom has imparted into the Fusion is undeniable, from its highly tactile hardware faders, to its touch screen interface, and near-infinite mix, recorder, and cue matrix-based routing possibilities."
(Steve Murphy, Audio Media, Dec 2008)

EDITOR'S COMMENT
"Zaxcom continues to push the boundaries of what can be done with a recorder. This unit is brimming with new features to make a location recordist's life easier and results better."

New PD Series Location Recorders
FOSTEX
www.fostex.jp
Fostex Company, 3-2-35 Musashino,
Akishima, Tokyo, Japan 196-0021
Email: info_sales@fostex.jp
Audio acquisition that's as versatile as you are.
Designed from the ground up to excel in 'real-world' applications, wherever you happen to be in the world. The new PD606 (8-track) and PD204 (2-track) location recorders both offer spectacular audio quality, flexible recording to 12cm DVD-RAM, hard disc or a combination of both, rock solid timecode implementation, extended battery life, loads of 'instant access' knobs, buttons and switches plus a whole battery of interface options.
But impressive features are only part of the script. Fostex's unrivalled pedigree in designing and manufacturing world class location recorders for over 16 years and our unique understanding of the broadcast, film, tv and audio acquisition environments means that these new recorders aren't just the best PD recorders ever, they're simply the best professional location recorders available today.

NO COMPROMISES

…BECAUSE YOUR STUDIO CANNOT HAVE A WEAK LINK

NEW **MPA1**
2-Channel Mic-Pre

PRE420
4 Channel Mic-Pre/Mixer

ADC1 USB
2-Channel 24-bit 192kHz A/D Converter

DAC1 PRE
Stereo Pre-Amplifier / DAC / Headphone Amp

When your clients expect professional results, your studio cannot have a weak link. The essential elements of your signal chain must perform with consistent integrity. It is important to use audio tools that deliver superior performance, unvarying dependability, and uncompromised quality.

Benchmark has developed a family of audio tools that never compromise: the new MPA1 microphone preamplifier; the **PRE420** microphone preamplifier; the **ADC1 USB** A-to-D converter; and the **DAC1 PRE** monitor system pre-amplifier / D-to-A converter.

Benchmark products set the standard for performance and reliability. Engineers have praised our mic-preamps for their breath-taking realism, true-to-life detail, and consistent performance - even in harsh RF environments. Our digital converter technology has become the benchmark of absolute accuracy due to the jitter-immune UltraLock™ clocking system, intelligent circuit layout, and pristine analog sections.
All **Benchmark** products are designed, assembled, and tested in Syracuse, New York, USA, by a team that is committed to quality craftsmanship and tireless customer support.

The **MPA1** is a 2-channel microphone preamplifier designed and manufactured by Benchmark Media Systems, Inc. The MPA1 is meticulously designed to Benchmark standards of transparency, ultra-low distortion, and ultra-low noise performance - making the MPA1 a perfect choice for stereo pairs, ribbon mics, and any other application where purity is the goal.

The **PRE420** is a 4-channel mic-preamp with a plethora of features, including built-in, independent stereo mix and solo busses. The sonic performance of the **PRE420** has been described as making the instrument "sound like it's being played right in front of me!" It delivers the audio with such clarity that no textures are lost or obscured by distortion or noise. The remarkably low noise floor spans a wide range of gain setting, making the **PRE420** the perfect pre-amp for ribbon microphones. For room and ambient recordings, the ultra-low distortion performance puts the listener in the live-room. Also, the **PRE420** circumvents
"Murphy's Law" with its bullet-proof "phantom-hot-plug" protection circuitry and incredible RF immunity.

The **ADC1 USB** is a reference-quality, 2-channel, 24-bit, 192-kHz A-to-D converter. The UltraLock™ clocking system delivers unvarying mastering-quality performance - regardless of clock source. The **ADC1 USB** offers variable input gain from -6 to +39 dB to interface directly with a wide range of devices. Precise levels are easily achieved with the 9-segment, dual-range LED meter.

The **DAC1 PRE** is a reference-quality, stereo monitor system controller with the DAC1's award-winning, 24-bit, 192-kHz D-to-A conversion system. The **DAC1 PRE** continues the legacy of the **DAC1**, which has become a staple of control rooms around the world. The analog inputs provide a simple and direct path to the monitors for mixing consoles, iPods, etc. The AdvancedUSB™ input supports native 96 kHz, 24-bit operation without cumbersome or invasive driver software. The built-in, 0-ohm HPA2™ headphone amplifier provides ultra-low distortion headphone monitoring.

Superior performance, reliability, and indispensable features have made **Benchmark** products absolute studio essentials.

www.BenchmarkMedia.com/
800-BNCHMRK (262-4675)

Benchmark
...the measure of excellence!™

AUDIO PROFILES

AN AUDIO MEDIA PROMOTIONAL SUPPLEMENT

AMERICAN PROFILES – Behind The Brands

Behind every great product is a company that's passionate about the providing tools for audio professionals everywhere – whether it's processing and preamps, software, or indispensible tools. To recognise this, *Audio Media* has brought together a selection of state-side company profiles that will hopefully shed a little light on the foundations of good product design.

42 – Benchmark
Setting the standard in both name and reputation, in its 30 years Benchmark has moved from broadcast to recording, from analogue to digital, and remains forward-looking and ever-ready to innovate for the future.

43 – McDSP
Ten years in the plug-in processors field, and McDSP are still on the up. Colin McDowell, McDSP's founder, talks to *Audio Media* about a decade of musical engineering, and McDSP's unique outlook.

44 – Audio Precision
Audio Precision (AP) is committed to easing productive audio testing for R&D and production line testing in consumer audio, pro audio, automotive, and broadcast industries. Chairman Bruce Hofer provides the insight on 25 years at the top of the audio analyser field.

45 – Telefunken
Bringing the classics back to life, Telefunken|USA has re-envisaged legendary microphones and brought them up to date, ready for the 21st century.

Raising The Bar

Benchmark Media Systems

Setting the standard in both name and reputation, in its 30 years Benchmark has moved from broadcast to recording, from analogue to digital, and remains forward-looking and ever-ready to innovate for the future.

Calling your company Benchmark (dictionary definition, 'A standard by which something can be measured or judged') means that you are setting the bar extremely high when it comes to the quality of your products. The moniker of the Syracuse, New York-based company, was obviously well chosen, as it has carved for itself an enviable reputation in professional audio. From its roots in the late 1970s, its products have graced the racks of engineers in applications as diverse as CNN, ABC-TV, and at Manhattan's Carnegie hall.

Allen H. Burdick formed the company in Dallas in 1979, after he found he could produce much better-sounding equipment than the television company for which he was working. In 1985, Burdick (and Benchmark) moved to New York and, though he has recently retired, the family connection remains in shape of his wife – who is currently the company's President. Vice President John Siau joined the company about 12 years ago, and initially came on board to bring Benchmark into the digital age. "My first products for the company were A/D and D/A converters, and then microphone preamplifiers," says Siau, "These days, I design all of Benchmark's products."

A Clear Path

Though Benchmark's genesis was in the broadcasting industry, it now makes up only 10 percent of their total business. About 40 percent of clients now come from professional recording studios and film production facilities, according to Siau. "One of the things that Allan realised early on was that to get the signal through the components that make up the audio signal chain, the broadcasting industry needed devices with higher bandwidth and very low distortion," says Siau. Benchmark's early products were well received, so they then started looking at the performance of the gear available to the audiophile. "It was significantly lacking," says Siau. "We saw an opportunity there to bring some truly high performance equipment into the audiophile arena, and it's been terrifically well received." He says that the company is committed to bringing new products to both the professional audio and home markets and, as in the past, equipment that appeals to both type of customer.

Number One

Straddling the fine line between the pro audio and hi-fi worlds, Benchmark was an early player in the high resolution digital audio market with its respected ADC1 and DAC1 digital converters. "When I designed the original DAC 1, I also had the home hi-fi people in mind," says Siau, "Our first success with DAC 1 was in mastering rooms as they were first to realise the unique advantages of the DAC 1, but then the audiophile and recording industry came to appreciate its advantages."

The home audio and recording fields are often at loggerheads as to what is considered to be a 'good' sound, with the hi-fi buffs often preferring ephemeral abstracts over sonic accuracy. "A lot of home hi fi is designed to be a little more 'musical' and less revealing than recording gear," says Siau. "But both parties benefit significantly from tight control of jitter, intermodulation distortion, and other problems peculiar to digital systems. It's possible to deal with these, and that is what we do very successfully in the DAC 1 and ADC 1 converters." For many whose day job it is to produce the highest quality audio, it can be frustrating that the end product may end up being compressed to lossy formats and listened to through inferior converters – but Siau is pragmatic about this. "If you listen to a MP3 through a DAC 1, you'll hear clearly just how poor the sound is. What is encouraging though, is that there are several higher resolution download sites now appearing, and one of the nice things about the DAC1 USB computer connection is that it has a very high performance 24-bit, 96kHz path – and these kind of things are just as important even when playing 16-bit CD quality recordings.

Benchmark's new DAC1 PRE stereo playback preamplifier has been designed as the central hub in a high-performance stereo playback system, and to interface directly with digital media devices such as CD and DVD players, music servers, satellite radio, digital cable boxes, and televisions – without ignoring 'legacy' systems like phono pre-amps, analogue tuners, and so on. "I always enjoyed the stunning delivery and breathtaking realism of Benchmark converters in my own home," says Siau, "But have often wished to have additional inputs to connect all of my digital, computer, and analogue sources. The DAC1 PRE delivers the connectivity that today's systems require but without compromising performance or quality."

Mic Machine

The company's latest product for the recording industry is the MPA1 microphone preamplifier. "Like its predecessors, the MPA1 was built with a focus on purity and it achieves some of the lowest noise and distortion specs of any mic-pre on the market," says Siau. The unit features a unique 38-position discrete gain control, which allows for exacting gain control in precisely matched discrete 2dB steps over a total gain range of 0-74 dB. Phantom-protection circuitry is incorporated to protecting the transistors, and there's also a phantom-disabling circuitry to protect when using the increasingly popular ribbon microphones. It's an all-analogue design – though it is of course possible to connect it up to the company's ADC 1 if you need to get the signal into the digital domain. "We worked really hard to get a wide range of gain at peak performance with the MPA1", says Siau.

In May 2008, Benchmark moved to a new manufacturing site in DeWitt, New York. According to Siau, the company's equipment is all designed and manufactured on site using the finest components from all over the world, but all assembly and testing is done on site. "We've got some specialised rooms here we use for testing of our products that we didn't have in our previous location," says Siau. "We've got a listening room that's set up for auditioning and evaluating our audio products. The move has been very good for us and given us the room to grow, which we needed as 2008 has been a phenomenal year for us." He is at pains to stress that the people working for Benchmark are just as important as the product itself. "We have a really high quality of staff here now, who are extremely committed to delivering a quality product on time to meet customer demands. We are very pleased with the people we have working here. As we ship all over the world, it's essential we make high quality and reliable equipment." With the rapid move to home distributed audio/media systems and 'in the box' mixing, Benchmark seems to be ideally placed to bring digitally recorded audio in pristine condition to the ears of both engineers in the studio and listeners at home for years to come.

Benchmark ...the measure of excellence!™

CONTACT DETAILS

Benchmark Media Systems Inc.

203 E.Hampton Pl.,STE 2, Syracuse, NY 13206, USA

t +1 315 437 6300

w www.benchmarkmedia.com

Digital By Design

McDSP

Ten years in the plug-in processors field, and McDSP are still on the up. Colin McDowell, McDSP's founder, talks to *Audio Media* about a decade of musical engineering, and McDSP's unique outlook.

It doesn't seem like five minutes since a session in the studio started off by demagnetising and lining-up your 24-track machine, before threading the tape and patching in all the hardware effects units. So it was a sobering thought to realise that McDSP, purveyor of plug-in products of distinction and quality, was founded way back in 1998 by Colin McDowell – hence the name of the company, of course. This makes McDSP one of the longest established players in a field that is still on the up slope of the bell curve of innovation, and their well-respected plug-in processors will almost certainly be found on a Pro Tools rig near you. Products such as FilterBank and CompressorBank have become staples in the audio armoury of many engineers, and the company now has a portfolio of software solutions that include the SSL-inspired Channel G plug-In, the analogue modelled Synthesizer One, and Chrome Tone guitar plug-ins.

Start Your Engines

McDowell is an affable character, and it's obvious that creating software audio tools isn't just a day job for him. "I've always wanted to combine music and engineering, and McDSP has been a great way of doing that.," says McDowell. "I like doing things my own way! For example, you'll notice the strong tendency towards green user interfaces on our products. In 1998, there were not many third party audio plug-in developers, and so the time seemed right from that perspective to start McDSP. From the product angle, I had (and still have) a strong belief software can sound as good or better than hardware – it's the old digital vs. analogue debate I suppose – but I really wanted to challenge the impression, common in the industry, that hardware is always better."

McDowell spent over a decade in the professional audio industry, and as a digital signal processing engineer, and in his stint at Digidesign he authored many of the company's plug-ins as well as the original TDM multi-shell prototype – so it's no surprise that the company has concentrated on producing plug-ins for the Pro Tools platform. "I am ex-Digidesign. This is like saying I used to work at the Death Star, but got tired of wearing that dang white battle armour!", laughs McDowell. "But I'm really good at writing plug-ins for the Pro Tools platform." It was not only experience that led McDowell to concentrate on Digidesign's software though, as he explains. "Early on, the iLok was not as widely used (if it even existed) – so copy protection and delivering authorisations to customers was not trivial – and so it became a barrier to moving over to other platforms."

He doesn't, however, rule out the company's products being available for other DAWs in the future. "These days, we've got a few engineers working on a variety of things," he says. "Going to other platforms is still on the books – we just have ten years of product we'd need to port! It would have to be done right the first time out, though. McDSP couldn't show up on another platform and expect the same cult following we enjoy on Pro Tools, unless we really kicked some butt on our first release."

Expansion Pact

Building on the original successes, McDSP has added the Revolver convolution reverb and the new ML4000 mastering limiter and multi-band dynamics plug-ins to their roster. In 2008, the DE555 de-esser, FutzBox lo-fi distortion effects, and NF575 noise filter were released, demonstrating that the company is keen to expand into new and intriguing areas of processing. Pro Tools on Windows XP is now supported, and the company is making inroads into the live sound arena via the new Digidesign Venue consoles. The ability to run the plug-ins on several flavours of Pro Tools system from HD to LE means that those who like to work on a laptop and a fixed studio setting need never be without their McDSP plug-ins.

While a lot of plug-in companies aim their products at the project studio market, McDSP set its sights on the audio professional from day one. "Early products like FilterBank, CompressorBank, and Analog Channel got a lot of professional engineers to take to the idea of working entirely inside of a DAW like Pro Tools more seriously, says McDowell. "Later, things like the ML4000 have really opened up the door for 'maximising', while still (hopefully) making better music." However, he is aware of the bad press these types of processors are getting these days. "You can make the tools for the right jobs," he says. "But that does not mean they always get used in the ways you intended them to be used!"

He also has strong views on his company's relationship with the people who buy its products. "I think McDSP has just shown folks you can run a small boutique software firm successfully without totally screwing your customers. I'd like to think they really have an attachment to us – their loyalty is based out of mutual respect, not some annual ritual of 'upgrading' their systems. McDSP has had a good

run, and we owe it to every dang customer out there – from Rob Barrett, our first customer, to the very latest purchase. We are glad to have the opportunity to make professional products for audio and not, say, missile guidance systems, cell phone chips – or work for the government!"

Future Proof

One of the more unusual aspects of the McDSP philosophy is that the company has never charged for updates, preferring instead to reward the loyalty of their customers rather than fleecing them for a continuous line of revisions whenever a new version of Pro Tools is released. "If a customer purchased FilterBank in 1999 for Mix hardware on OS 9, then updated to OS X, HD and HD Accel hardware, higher sample rate support, all the new Pro Tools plug-in centric features introduced during that time, support for every new Digidesign control surface to date and support for Intel-based Macs, that customer would have been charged nothing," explains McDowell. "Why? Well, we have some of the most talented and loyal clients any company has ever had the privilege to serve. I can't see us shafting them with update fees!"

"McDSP, in my completely biased opinion, has created a reputation for solid products backed by solid customer support", says McDowell. "Our software is reliable, efficient, and does what it is supposed to do. Audio processing can get mighty fancy, but no one gives a hoot if the basic operational needs are not satisfactory." Given McDowell's views on software versus hardware debate, it's not surprising that he has great expectations for the future of his company. "I want McDSP to be to the audio software industry what Neve, Massenburg, Manley and so on are to hardware. Being able to create that kind of brand equity is rare, especially in software, but I think McDSP is up to it. We'll just have to see how the next 10 years go!" AM

CONTACT DETAILS

McDSP – McDowell Signal Processing, LLC.
1300 Crittenden Lane, No.401, Mountain View, California, 94043, USA
t +1 650 318 0005
w www.mcdsp.com

Audio Precision

25 Years As An Industry Standard

Most professional, consumer, and broadcast audio manufacturers spend considerable time, money, and effort to ensure that their products meet the highest quality standards and produce and/or reproduce the most accurate sound possible. As R&D departments design, build, and test their audio products, they have to trust that the equipment they use is absolutely precise. Audio Precision, arguably the leader in audio test and measurement equipment, has nearly 25 years of experience in exceeding their customers' expectations with their audio analyser hardware, software, and other accessories.

Continuing their trend of raising industry standards, Audio Precision issued the APx Series, an efficient next-generation audio analyser platform that offers one-click measurements, two- eight- or 16-channel model configurations, and an automated measurement sequencer and continuous sweep technology that can derive 14 measurements in as little as seven seconds.

The recently introduced APx520 and 525 analysers both offer two balanced and two unbalanced analogue inputs and outputs, while the APx525 comes with 192K digital inputs and outputs. Both models generate signals down to 0.1Hz.

Audio Precision's latest, and perhaps most groundbreaking new development, however, is their new HDMI option module for the APx585, making it the first multi-channel audio analyser capable of testing HDMI and Blu-ray audio. Engineers working with HDMI can now use the APx585 to measure HDMI audio quality on devices such as surround sound receivers, set-top boxes, HDTVs, and DVD and Blu-ray disc players.

"There are so many protocol standards that HDMI can support in audio and video," says Hofer. "HDMI literally asks the device that it's talking to, 'What are you capable of reproducing? What format should I send you the data in? Do you want your audio in stereo, Dolby 5.1, Dolby 7.1, HD, et cetera?' Before we released this HDMI interface, there had been no way that a manufacturer could systematically check its product for functionality against all of these different standards."

Current Chairman Bruce Hofer and fellow engineers Robert Wright, Bob Metzler, and Rich Cabot, founded Audio Precision in 1984 after collaborating in the labs of test and measurement equipment manufacturer Tektronix. "We had developed a couple of audio products for Tektronix and they were immediate hits," says Hofer. "Following their business model, the company decided not to do any follow-up products. That left us as a team thinking, 'What's next?' Do we shake hands and go our separate ways, or take this audio thing to a different realm? We chose the latter, and that became the genesis of Audio Precision."

At the 1985 NAB Convention – six months after incorporating – Audio Precision debuted their first prototype. Within a year, they were in the black. Within two years, they had become an industry standard.

"We offered a very cost-effective solution to automation," says Hofer. "We were the first way most companies automated their production tests in the world of audio. We also set out to reach an international market. We signed our European distributors at that first NAB show."

Today, about 20 distributors carry AP products in more than 100 countries, with an especially strong presence in Europe. "Our partners have extensive training," says Tom Williams, Audio Precision's Director of Marketing Programs. "They know the kinds of problems that our customers face in audio test and are doing a good job of solving those problems as well as providing the right equipment."

To further enhance technical support in Western Europe, Audio Precision recently set up an independent service centre in the Netherlands. "We have replacement modules and calibration capabilities," says Hofer. "Anywhere in Europe it's a quick overnight shipment to get instruments to the service centre for quick repair. That's been very successful and very well received." The company's US headquarters in Beaverton, Oregon, serves as the main technical support and service centre, although many AP's international distributors offer adjustment and repair services for equipment sold in their regions.

Audio Precision's broad customer base includes manufacturers in recording and broadcast, A/D and D/A chip design, computer audio, automotive audio, home entertainment, personal stereo, and telecommunications. Audio Precision's instruments are paramount for quality control and testing of a manufacturer's products; therefore, their own quality control is crucial to their success.

"We have three layers of tests, staringt at the modular level," says Hofer. "We do most of our own internal final assembly. We test the modules first; then they're assembled into complete instruments and tested again. After that, the products go through our automated calibration lab."

Accredited by American Association for Laboratory Accreditation (A2LA) under ISO/IEC: 17025 for equipment calibration, all AP products ship with a complete, certified calibration report. "We go to a lot of pains to check our own equipment because people fundamentally trust us," says Hofer. "Manufacturer test measurement equipment is accepted as the ultimate reference, so we make very sure that we deliver that kind of quality."

As audio manufacturers continue to develop new technologies, the equipment used to test their wares develops, as well. "The world of test and measurement is certainly not stagnant," says Hofer. "Technology is always moving forward and bringing us new challenges and new things to measure."

Audio precision

CONTACT DETAILS

Audio Precision

5750 SW Arctic Drive, Beaverton, OR 97005

t +1 503 627 0832

w www.ap.com

e sales@ap.com

Telefunken USA

Re-Making A Legend

Bringing the classics back to life, Telefunken|USA has re-envisaged legendary microphones and brought them up to date, ready for the 21st century.

The very mention of the Telefunken brand name is almost guaranteed to melt the hearts of even the most hard-boiled sound engineer. The original vintage Austrian – manufactured Ela M 250 and 251 microphones, are highly regarded amongst audio professionals, but working examples are becoming hard to find and even harder to keep in anything approaching pristine condition. Telefunken GmbH was founded in 1903, and emerged as one of the largest manufacturers and distributors of electronic equipment worldwide.

A New Start

In 1998, Toni Fishman, now Founder and President of Telefunken|USA, purchased what was amongst the largest collections in America of the aforementioned company's microphones, along with other tube-based vintage models from Neumann, and AKG – which originally had been assembled for Warner Nashville's recording facility, The Loft. He saw an opportunity to bring the old classic back to life via a precisely re-engineered design that would be true to the original, right down to the last screw. The Ela microphone's complex dual diaphragm design proved to be the trickiest engineering problem, as did the fact that no definitive blueprints for the microphone and its ancillaries existed, so engineering drawings had to be lovingly recreated from dismantled microphones and the know-how of long-time Telefunken users.

The result was the Ela M 251 that Telefunken|USA says is 'a tribute to the classic microphone.' The mic is also available in a new 'no frills package', the Ela M 251F, which houses the same meticulously hand-crafted components and vintage tube as the 251, but without the impressive flight case and with a power supply, which is a modern version of the original. "After perfecting our reverse-engineering technology in the re-creation of the 251, and with the manufacturing breakthroughs we've achieved in the last six months, we have been able to minimise our costs considerably and can now pass this savings onto the recording community," explained Fishman. "You might think of the new package as a coach ticket as compared with business class – the price is different, but you still arrive at the same destination."

Fishman says that the Ela M 251 has gained widespread recognition among the recording industry's top professionals, and that the microphones have made their way into the hands of many award-winning producers and engineers – and are in use by some of the music world's most successful artists. "We are very proud of the hard work and investment we have made in bringing back the sound of the most sought after microphones ever built," says Fishman. Telefunken|USA currently has a staff of 15 people, headed by Director of Production Alan Veniscofsky – who is himself an experienced recording engineer. "The historic reissues of the original classic Telefunken microphones are built by hand, at Telefunken|USA's Connecticut facility with parts that are almost entirely custom made for Telefunken in America," says Veniscofsky.

Outstanding Peer

Though there are many sought-after classic designs that have the potential to make their mark in the modern recording environment, Veniscofsky feels that the vintage Telefunken microphones are rather special. "They were originally manufactured by the three acknowledged European leaders in condenser microphone technology, and are revered as the finest recording microphones ever manufactured," he says. "Telefunken|USA takes great pride in having been able to provide historic reissues that have been widely accepted as identical to the original microphones."

Telefunken|USA was incorporated in 2001, after Fishman purchased the Telefunken Trademark for the United States, and the company now produces a series of reverse-engineered vintage design products from its Connecticut-based manufacturing facility. These include the Ela M 270 (which is essentially a stereo 251), 250E (a version with two polar patterns), and the AKG C12-inspired M12, which we build to the original Austrian blueprints. The company also produces a replica of the Telefunken-badged classic Neumann U47 model, along with the intriguing CM47 'CineMic' – which is a recreation of the microphone designed by Metro-Goldwyn-Mayer Chief Sound Engineer Stanley Church in the 1950s, for use in the company's sound stages.

More To Come

Though Telefunken|USA's designs are firmly rooted on the triumphs of the past, the company itself is looking to the future. Originally devoted exclusively to manufacturing exact replicas of historic Telefunken models, Telefunken|USA has now widened its horizons to include highly customised microphones, created with parts which originate worldwide in combination with proprietary electronic components. "Our product line has expanded to include custom-designed ribbon microphones and dynamic microphones, all built with the intention of exceeding the somewhat limited specifications of previous designs," says Veniscofsky. "Telefunken|USA is currently in the final stages of reverse engineering, and will soon unveil another addition to its line of historic reissues," he adds. Future plans include outboard processing equipment, microphone preamplifiers, vacuum tubes, and other products related to the Telefunken lineage. "Our most recent product offering is the Telefunken VF14K, a direct replacement for the venerable VF14 vacuum tube which has been out of production since 1939," says Veniscofsky. "It's the one found in the vintage U47 microphone which was designed in 1946, and still overwhelmingly popular."

No Compromise

Though there are many modern budget microphones on the market which visually ape the classics of yesteryear, Telefunken|USA's offerings are obviously not just Chinese designs that have been re- badged after a bit of tinkering. The company is proud of its recreations, and the list of users is a long and growing one, including the likes of Oceanway Recording, Real World Studios, and Dweezil Zappa. As for the latter name, you may possibly have heard of his father, Frank, a man who was well known for using the occasional Telefunken and whose collection Telefunken|USA is restoring. "We are very proud of the hard work and investment we have made in bringing back the sound of the most sought after microphone ever built," says Fishman. "We go to great lengths to recreate the vintage designs as accurately as humanely possible."

TELEFUNKEN | USA™

CONTACT DETAILS

Telefunken USA
300 Pleasant Valley Road, Suite E, South Windsor, CT 06074, USA
t +1 860 882 5919
e contact@telefunkenusa.com
w www.telefunkenusa.com

DAVID HELPLING has his mind blown away by the advances MOTU has made with its latest version of Digital Performer.

MOTU
DIGITAL PERFORMER VERSION 6

Digital Audio Workstation

Whether you're a Digital Performer power user, an outsider looking for a better creative DAW solution, or a shiny-eyed new audio warrior ready to start a career, Digital Performer 6.0 is very good news all-round. New features include a completely redesigned user interface, XML file interchange with Final Cut Pro, track comping, support for interleaved audio file formats, pre-rendering of virtual instruments, enhanced operation as a front end for Pro Tools HD systems, and the ability to 'bounce and burn' directly to an audio CD. Beyond these new features are hundreds of small enhancements driven by DP users and improved performance at all levels, adding unprecedented value. Has MOTU turned a serious corner here with DP6 and risen to the challenges of the ever-evolving world of the Apple-based DAW?

Not Just Another Pretty Face

As a daily user of Digital Performer, the new interface is the most obvious sign that this is much more than a mere upgrade. MOTU calls it, 'a sleek new look and feel to inspire your creativity and drive your productivity'. From the smooth shades of grey and muted colour schemes has emerged a bright, crisp, and sharp new DP6. MOTU has kept the classic interface intact but pushed the look towards a cross between Abelton LIVE and Pro Tools.

I personally LOVE the new look – it feels as new and bold as the transformation underneath – it is a joy to work in and seems to inspire something in me. As a user going back to before DP was 'digital', I am ready to leave the melancholy grays and periwinkle days of the Unicorn far behind. The new interface has instigated a few uprisings on the DP forums where some members complain of the new look being too bright, and the relocation of some tabs and buttons to be an issue. MOTU immediately addressed the most talked-about forum concerns in the 6.01 update, including colour adjustments, snapshot button, track inspector palette (to bring back play/rec buttons in Graphic Editor), real-time plug-in preferences, Load button in the selection palette, and others. These features are all mentioned in the 'Read Me' doc that ships with 6.01. So, the guys at MOTU obviously read the forums regularly and responded with an update instantly – cool!

A New Size Fits All

A very exciting new addition is the 'vertically resizable track list'. The 'Tracks' window is the global home base for routing and viewing of all of the audio and MIDI in your session. The ability to vertically increase the size of the tracks in this window while viewing the audio waveforms is wonderful. This allows for a wealth of audio editing before fine tuning fades and automation in the Sequence Editor window. With one click you get a better look at each track's settings and graphic overview. In general all windows look cleaner and information is easier to see. Zooming and navigation controls have been unified throughout while live window resizing allows you to see the contents of the window as it is resized – very fancy. Along with the new look are three new waveform colouring options including the background behind the waveform itself. The ability to customise the interface this much shows a trend towards user empowerment in the future on many levels.

Sleek, Slender, Graceful

In addition to its new 'look and feel', DP6 has been streamlined in many ways. There are far too many new enhancements in this area to dive into complete detail and complexity, so let's cover the major ones. Window tabs allow the user to create as many tabs as needed in any consolidated window sidebar cell. The completely new Inspector Palettes serve as a sort of 'rap sheet' on a particular track, showing all relevant stats. These info panes can float as independent windows or 'pop ' into the cwindow as sidebar cells with tabs.

One issue that many of us daily users have had with DP, is the inability to disable the tiny pop-up help bubbles that appear as your mouse travels atop the user interface. Now in DP6 us seasoned users have the esteemed pleasure to disable Digital Performer's floating tool-tip help tags – thanks for listening MOTU.

The new Track Comping feature is a major shift towards DAW supremacy. This comprehensive feature offers limitless comping possibilities and the ability to create a comp with just a few clicks. Digital Performer users have always had the power to record many multiple takes into a track, and then choose one take as the frontmost for playback and editing. Now with one click of the 'Show Takes' command all takes are exploded out to individual virtual tracks! Imagine viewing all 11 vocal takes together instantly. Then with the Take Tool, you can easily make split points across all takes. No need to click and drag these regions to the composite (comp) take – simply click the desired section from each take to quickly create the master – now consisting of the sections selected from each take. If this wasn't awesome enough, the 'Turn All Takes Into Tracks' and 'Absorb Tracks' commands allow you to explode takes into tracks, or collapse tracks into takes, respectively.

The Power Of Invention

MOTU has created an invaluable tool that can save hours of tedious editing. Cuts and edits in audio often produce gaps between soundbites. This is especially true when editing dialogue, sound design, and using DP's beat editing features. These gaps of silence are often audible and unnatural to the ear. The Smooth Audio Edits feature will automatically fill all gaps with 'room tone' to mask them, complete with automated crossfades for 100% seamless transitions. You can create your own room tone or have Digital Performer find room tone for you in the original audio files, so that it exactly matches the natural silences in the audio. This is a breakthrough in DAW evolution, and makes DP6 a unique tool for dialogue work alone.

Four new editing tools have been added to DP's arsenal: 1) Trim (drag region edges without needing to select the edge), 2) Slip (audio moves, region edges stay put), 3) Slide (region edges move, audio stays still), and 4) Roll (drag adjacent region's border). These very ▸

THE REVIEWER

DAVID HELPLING is a full-time composer/producer with over ten years experience in music for picture. He runs DHM Music Design in San Diego, California, producing music for film, TV, corporate, interactive, and web clients. David has two ambient/cinematic albums released on the Spotted Peccary label, with a third now in production, and has several independent film projects on deck. Clients include DELL Computers, Hewlett Packard, Boeing, Lexus, Microsoft Game Studios and Qualcomm.

THE BIGGEST NO-BRAINER IN PLUG-IN HISTORY

A COMPLETE PRO TOOLS HD® PLUG-IN COLLECTION FOR £299.99

Why pay for just one modelled plug-in, when you can can have 60 high quality dynamic convolution plug-ins for less?

Liquid Mix HD gives you the sound of 40 different vintage compressors and 20 individual classic EQ's, all running on a Pro Tools HD® system. Run over 100 mono instances simultaneously on an HD|3 system.

Every instance operates with an unbelievably low latency of just 12 samples – ideal for mix-down, tracking or even live sound use.

More variety, better quality and greater flexibility than any other plug-in on the market; Liquid Mix HD is the biggest no-brainer in plug-in history. As a Pro Tools HD® user, why consider anything else?

LIQIUD MIX HD - 40 VINTAGE COMPRESSORS AND 20 CLASSIC EQ'S IN A SINGLE TDM PLUG IN

LIQUID® MIX HD

IMPORTANT INFORMATION: FOCUSRITE, the FF logo, LIQUID TECHNOLOGY, LIQUID MIX CONTROL and the LIQUID MIX logo are trademarks of Focusrite Audio Engineering Ltd. DYNAMIC CONVOLUTION is a trademark of Sintefex Ltd. The Liquid Mix product is an independently engineered technology which utilises the patented process of Dynamic Convolution to actually measure examples of the sonic impact of original analogue products upon an audio stream, so as to electronically emulate the performance of the original product studied. The result of this process is subjective and may not be perceived by a user as producing the same effects as the original products studied. Digidesign, Pro Tools, and Pro Tools|HD are registered trademarks of Avid Technology, Inc. in the United States and/or other countries. All other trademarks contained herein are the property of their respective owners.

audio heritage | sonic integrity | professional solutions

t: +44(0)1494 462246 e: sales@focusrite.com

Focusrite®
www.focusrite.com

handy tools offer a manner of manipulating audio in ways that were previously impossible in Digital Performer.

Multiple mixdowns are now possible within a single session in a single mixer. The Mix Mode menu in the Mixing Board lets you create, save, edit, and switch between multiple mixdowns of your project. This makes it effortless to create and use multiple mixes. Since a 'mix' in DP6 consists of all volume, pan, mix automation, and current plug-ins inserted on tracks, this provides complete independence among separate mixes. For example, you could simply set initial volume and pan settings for each track, create a mix, duplicate it, adjust the faders, and then switch back and forth between the two mixes. You can then freely switch between them, comparing the fader settings, without the need to insert or print any automation data. Holy Moly!

Feel The Burn

With Direct audio CD burning, you can simply drop your songs into a track, add markers for index points anywhere you want, add DP's fade and automation tools, and apply mastering plug-in processing as desired. Then, choose 'Bounce to Disk' with a format of 'Burn Audio CD'. DP6 creates a standard audio CD for use in any CD player and can also create a disk image for easy replication and archiving. Never has it been easier to create a preview CD for a client and drop it off at FedEx. With this added feature along with DP's powerful Waveform Editor, it is safe to call Digital Performer 6 a fully fledged mastering application.

DP6 delivers significant performance gains for DP's included MAS instruments and third-party Audio Unit instruments alike. You can now run many more sequenced virtual instrument tracks, as DP6 now pre-renders instrument track output before playback actually begins, allowing the computer's CPU to distribute the required processing beforehand, rather than in real time. You'll use instruments in the same familiar way, just more of them at the same time. Because they are now pre-rendered, instrument tracks can now be included in Bounce to Disk operations without the need to 'freeze' the instrument track beforehand. The ability to bounce a VI is amazing, and something I never thought would be possible.

New Plug Ins?

With DP6 comes two new serious plug-ins: The MasterWorks Leveler, and ProVerb. The MasterWorks Leveler is an accurate model of the legendary Teletronix LA-2A optical leveling amplifier, known for its unique and highly sought-after Automatic Gain Control (AGC) characteristics. This is a great sounding compressor with tons of attitude and vintage sound style. Deep and precise compression is not what the LA-2A is about, and can be achieved instead with DP's other premium dynamics processor: the MasterWorks Compressor plug-in. Because the opto-coupler type of signal detection is modelled so closely here, you may be achieving a fair amount of compression without

AUDIO MEDIA 2008 Gear OF THE Year

Lexicon Reinvents Reverb

sound Distributed in the UK and Eire by Sound Technology Tel: 01462 480000 **www.soundtech.co.uk**

being aware of it. The self-adjusting behavior of the LA2A has an almost magical way of smoothing out just about any audio material without destroying perceived dynamics. If you want the type of compression and limiting that the LA-2A has to offer then you will love this plug-in. While it may not be the only compressor you'll ever need, it will certainly be a great addition to your stockpile of trusty processors.

ProVerb is a CPU-efficient convolution reverb plug-in that truly delivers the sound of realistic acoustic spaces to Digital Performer. While convolution reverb is known for its realism, somehow ProVerb seems to have a lush 'Lexicon' sound overall and is highly tweakable, including a full four-band equaliser for the reverb tail. ProVerb is frighteningly processor-efficient for such a dense a detailed sound, and always seems to amaze me in comparison to similar plug-ins such as Altiverb and WAVES IR1. Particularly when what might take 10 seconds in other convolution plug-ins occurs in real time in ProVerb! For that matter, all parameters can be adjusted in real time, including those that modify the impulse response waveform itself! It comes with dozens of preset impulses (halls, stages, plates, and cathedrals) but the power of ProVerb lies in the ability to simply drag and drop any standard audio file into the waveform display to create your own spaces. This becomes extremely valuable when you start searching the web for all of the many high-end (and free) impulse responses that are available. There are many other wonderful features here including complete Surround support and a Dynamic Mix feature that automatically 'ducks' the wet signal as the dry input signal rises. Current convolution reverb plug-ins of this caliber easily cost as much as DP6 itself – think about it.

FCP, Meet DP6

Both Digital Performer and Final Cut Pro offer complete end-to-end production workflow: Final Cut for picture and DP for sound. While recent advances in DP have made it in strong film scoring features, DP6's new Final Cut Pro XML file interchange features could very well revolutionise the way film scoring and soundtrack production is done. Seriously – this is a tool that has already changed the way I cut music and audio for picture with my clients running FCP. It's not perfect but already goes way beyond what any DAW has attempted thus far. DP6 now allows for a dynamic link between the FCP editor and the DP6 engineer. This link can be managed remotely via e-mailed XML interchange files (which are tiny), or via a dynamic link between DP6 and Final Cut running side by side on the same computer.

> "...this is a huge breakthrough for those of us using DP to edit and mix sound for picture. These time-saving features offer the possibility for a quantum leap forward in up-to-the-minute delivery of changes to music and sound for picture – thank you MOTU."

Here's how it works. When picture edits are made in Final Cut, the FCP editor can export an XML file that describes all current edits, which the DP6 composer/editor can simply import to then compare and conform all music and audio tracks to the latest picture edits. All changes are displayed in DP6's new 'Import Final Cut Pro XML' window, which provides a complete, detailed list of every new picture edit. Double-click any edit in the list, and DP6 scrolls to and highlights the location of the edit in the Sequence Editor time line. The highlight shows a blue border (old position) and red border (new position) for each picture edit. The DP6 composer/editor can then adjust their session as necessary to conform to the new edit, 'snapping' their edits to the vertical red line if necessary.

PCM96 Stereo Reverb/Effects Processor

28 new and legendary Lexicon reverbs and effects delivered by powerful hardware processors, controlled and automated by your DAW.

Get the full story at **www.lexiconpro.com**

Lexicon®

A Harman International Company

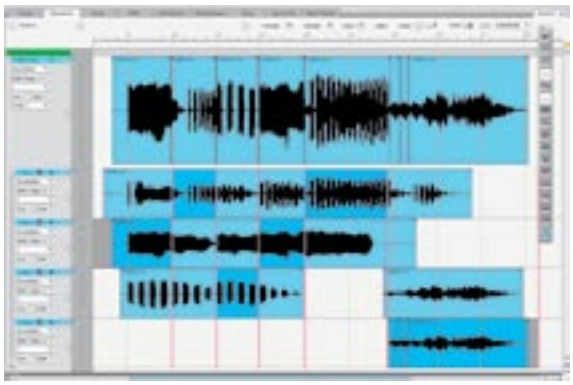
A Powerful, Friendly Face For Pro Tools Users

If you are one of the many Pro Tools HD users out there that have a fondness for the interface and creative power of Digital Performer, now more than ever DP6 can act as a seamless and complete front end for your system. In fact, DP6 is fully qualified for use with Pro Tools 7 systems running under DAE Version 7.3cs4 or higher.

This comprehensive new support includes: robust AAF session interchange, RTAS instrument support, FXpansion VST-RTAS wrapper support, plug-in automation for any TDM, HTDM or RTAS plug-in, plug-in latency compensation, instrument track support, RTAS and AudioSuite plug-in support, Mono and stereo sends, send automation, automatic voice allocation, DirectMIDI support, QuickPunch support, TDM plug-in side chain support, System Resources Usage Window, enhanced audio bundle support, mute automation, and many more refinements and performance improvements.

Say Goodbye To Split SDII Files!

DP6 now allows you to choose Broadcast WAVE and AIFF as the native audio file format in addition to the (now aging) Sound Designer II (SDII) format. On top of that, DP6 can now record and play interleaved audio files (stereo and surround). This saves an enormous amount of time when importing and exporting files, and greatly reduces the number of files to manage when working with interleaved file formats. An emerging file format used for high-end applications, floating point audio files are now supported in DP6. This allows you to take advantage of the same exponential headroom and dynamic range Digital Performer employs internally when performing floating point computations for mixing and processing.



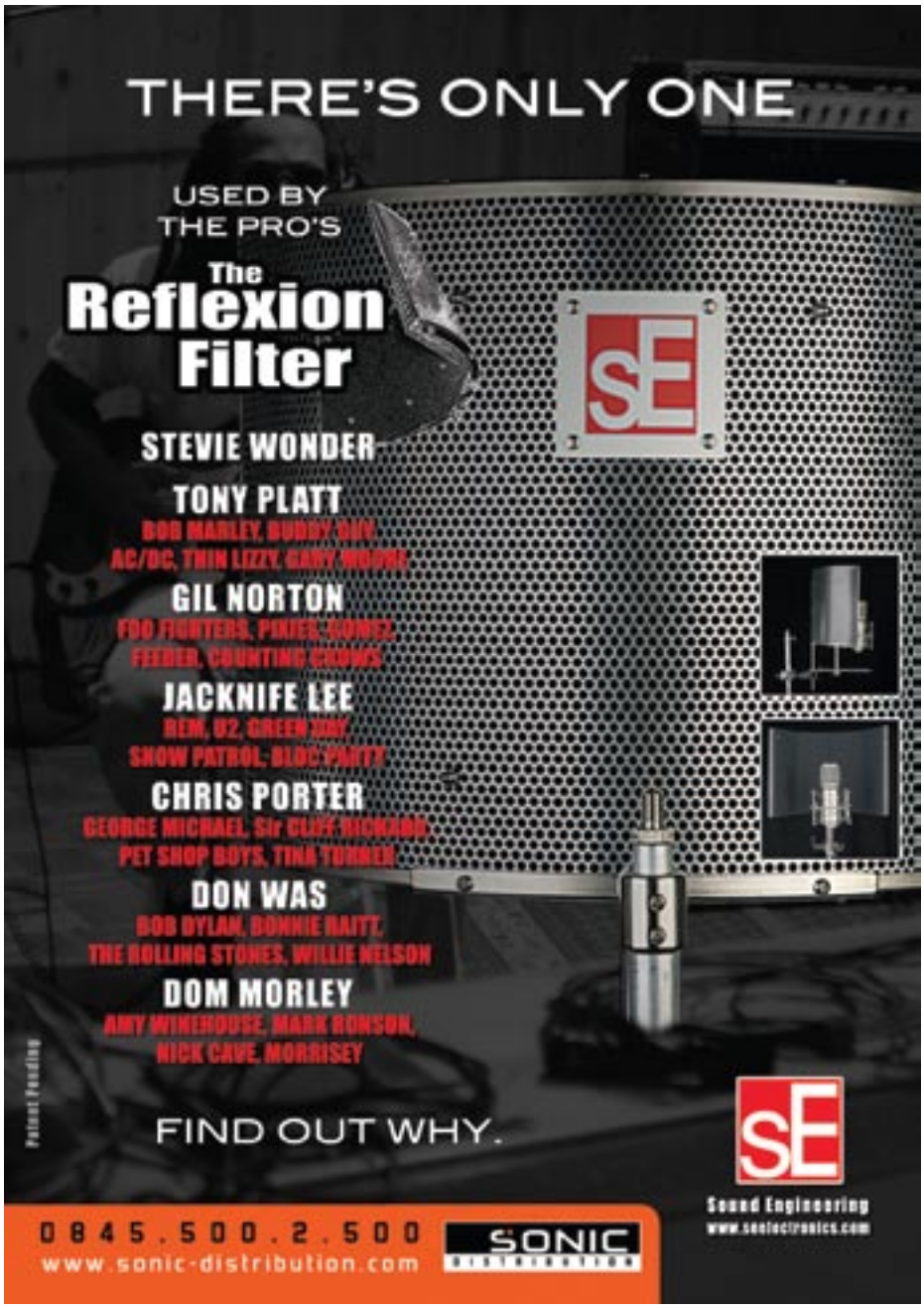
Manage Those Plug-Ins!

With so much power available to engineers on the Apple platform, it is very easy to overwhelm oneself when searching for the right processor or tool in your system. In an average pro setup, the number of third party and native installed plug-ins can easily reach into the hundreds. Simply adding a compressor to an audio track often involves having to navigate through a long vertical list of plug-ins. DP6's new plug-in management feature allows the enabling or disabling of individual plug-ins, thus creating plug-in sets. Imagine having only the plug-ins you use for voice work as one preset and another set for sound design. This feature not only cleans things up immensely, but saves system resources and allows for a much faster project load time.

Even after everything we've covered here, there are many other features still untouched. From enhanced OMF interchange and Apple Loop import, to improved OMF/AAF import and multiple outputs for audio unit plug-ins and ReWire.

Conclusion

Digital Performer 6 is simply amazing, and is easily the most stable version to date. I myself use DP6 at least eight hours a day, and there is no end to the level of creativity and magic one can conjure up for music and film production. For voice and dialogue work, DP6 is simply the best tool on the planet for my needs. If you are an existing user, you'll work faster. If you are a new user, you'll learn Digital Performer quickly and easily. With amazing advances and new features, two new monster plug-ins, interleaved Broadcast WAV support and Final Cut Pro integration, Digital Performer 6 is my (not so) secret weapon in the ongoing mission for stunning music and sound production.



INFORMATION

£ US$795.00 (exc.tax)

Ⓐ MOTU, 1280 Massachusetts Ave., Cambridge, MA 02138
Ⓣ +1 617 576 2760
Ⓦ www.motu.com

Ⓐ UK Distributor: Musictrack
Ⓣ +44 (0) 1767 313447
Ⓦ www.musictrack.co.uk

HV-3R
Remote Microphone Preamp

Eight Channels of HV-3 preamps
Remote control via Ethernet or MIDI
Pro Tools HD Compatible
ÆLogic Remote Control PC Software
HROE option for three outs/channel
AD - R96 option A to D converter

AUSTRALIA www.awave.com.au
AUSTRIA www.ton-eichinger.at
BELGIUM www.apex-audio.be
BOSNIA artist@teol.net
BRASIL www.visomdigital.com.br
BULGARIA www.bulcomp.com
CHINA (PROC) www.centrmus.com
CROATIA www.neuron-d.com
CZECH REPUBLIC www.mediatronik.cz
DENMARK www.kinovox.dk
FINLAND www.soundata.fi
FRANCE www.imporaudio.fr
GERMANY www.megaaudio.de
GREECE www.location-hiend.com
www.kemelectronics.gr
HONG KONG www.centrmus.com.hk
HUNGARY www.audiomonde.hu
ICELAND www.pfaff.is
INDIA www.indigomediatechnologies.com
ITALY www.tedes.it
JAPAN www.tacsystem.com
KOREA www.midigraphics.co.kr
MALAYSIA www.daxcodigital.com
MEXICO www.diuxi.com
NETHERLANDS www.helios.nl
NORWAY www.prolyd.no
POLAND www.mbspro.com.pl
PORTUGAL www.audiopro.pt
RUSSIA www.binarpro.ru
SINGAPORE www.team108.com
SLOVENIA audioprolj@siol.net
SOUTH AFRICA goeast@netactive.co.za
SPAIN ronburke@grupouni2.com
SWEDEN www.zima.se
SWITZERLAND www.flyline.ch
TAIWAN, ROC www.audiosolution.com.tw
TURKEY www.radikaltr.com
www.akalinmuzik.com.tr
UKRAINE www.entry.kiev.ua
UNITED KINGDOM www.scvlondononline.co.uk

Millennia
Music & Media Systems
www.mil-media.com
530-647-0750

B Corporation
bcorporation.net

Win Loads of Stuff!

SWAG COMPETITION IT'S CHRISTMAS... AND SCHWAAAG IS BACK!

As if Christmas could get any better – well, now it has! Win yourself a Santa sack full of audio stuff that we've managed to blag on your behalf from manufacturers all across the industry. 'Tis the season for giving, after all.

With Thanks...

All kinds of Christmassy thank you's to everyone who contributed, little or large, to this year's SWAG stash:

AEA * Allen & Heath * Audio-Technica * DiGiCo * Digidesign * DPA * Euphonix * Genelec * iZ Technology * JBL Professional * Klark Teknik * Klein + Hummel * Korg * Magix * Mercenary Audio * Millennia * Nacre * Neumann * Neutrik * PMC * Rane * RSS Roland * Rycote * SCV London * SE Electronics * Sonifex * Tascam * Unity Audio * Universal Audio

Sounding Out The Star Swag

Never mind Hollywood moms pushing their little Fifi-Fluffy-Madonna-Trixibell-Banana under the lights of the stage; now your little darling can be edged into the sound profession before they're even old enough to protest. A big thanks to DiGiCo for one of this year's star swag items – the cutest powder blue t-shirt for mini-me's: 'More output than input' – it says everything. An audio superstar in the making. (Bear not included – he's only posing to make a break into the modelling profession).

Yes, the hotly-anticipated *Audio Media* Schwaaag Competition is back for a third running this Christmas. We've pestered and cajoled, harassed, beleaguered, bribed and begged manufacturers from every dark little nook and cranny of the audio industry to donate something for our Santa sack – and most have duly obliged, clearly influenced by the seasonal spirit (of the un-bottled variety... we think). Or perhaps it was the threat of the *Audio Media* office paying a personal visit to sing Christmas carols..? In elf costumes. With tights. Either way, we now have a whacking great stash and caboodle of goodies to give away.

So, you're going to need an extra large fluffy stocking to fit this lot in – we've got bags and mugs, books and badges, a pile of t-shirts (yes, the diamante one included as well!), stickers and caps, pens and USB sticks. We've got card games and tape measures, coasters and CD cases, mousemats (for mousy aerobics après-Christmas?) and straps for your suitcase – and even things we're not entirely sure what they are! But it's all good – and it can all be yours! And you don't even need to visit Santa's grotto and make promises you don't intend to keep to get your mitts on it either. All you need to do is enter our dead easy competition (only as it's Christmas – we wouldn't want to make it too difficult or stressful, or anything that might interfere with the turkey dinner).

The Competition

Three Santa sacks are on offer – the biggest and most bulging to the first person with the correct answer drawn out of our fluffy, flashy (well, if we put batteries in, the pom-pom would) Santa hat; and two runners-up prizes of slightly smaller Santa sacks to the second and third correct answers drawn from the hat.

The Big Question

All you need to do, is tell us **what film was on the cover of last month's *Audio Media*** (it's hiding behind the Christmas tree in the big SWAG picture). If you really don't know, then www.audiomedia.com might help... Send your answer to schwaaag@audiomedia.com, along with your name and address, by January 1, 2009 – and good luck!

RULES:

1. If you work for Audio Media, you can't enter. Tough.
2. The deadline for entries is January 1, 2009.
3. E-mail your answers to schwaaag@audiomedia.com.
4. The Editor's decision is final, and no correspondence will be entered into (in all things – not just swag).

It's Not Just The Sprouts…

Scrap the traditional game of familial Trivial Pursuits after Christmas dinner – try a game of Trumps. Or ten. Thanks to Neumann who sent in not one, not two, but ten games of special Neumann Trumps cards to stave off boredom in the afternoon post-turkey/pre-Queen's speech lull. You could even mix all the cards together and have one huge, mammoth-sized Trumps game to last all evening. That's presumably if you're not already too busy posing beside the Christmas tree in your hunting weste.

Ink Will Never Be A Problem Again

The peeps at RSS Roland must have had the following situation a number of times: you're sitting in an exam or meeting, scribbling away, when, 'Oh no, the pen's run out of ink!'. But that's okay, because you have a back-up pen, a-ha! (you're not that silly, are you?). But, 'Double drat, the back-up pen's dried up and doesn't work!'. Well, RSS has solved that problem once and for all – 48 clicky red pens, all shiny new and in perfect working order. You might well need a bigger pencil case…

I Wonder Why That Reindeer Disappeared So Fast..?

Neumann must have the best 'employee team building' weekends on offer. Perhaps one to wear after the Big Day, so as not to frighten off Rudolph, thanks to Neumann for sending in a black hunting weste. With zips and pouches stylishly fashioned at every angle – and we're still finding new pockets in it – you'll only need some camo trousers to complete the look. And rather than spending the new year hunting down reindeer for delivering naff presents of socks and more socks (again), we suggest paintballing, or just plain posing.

SWAG Highlights

Highlights of the **325 SWAG items** we've had in, include:

1 Rane USB Watch
60 Millennia Velcro Cable Ties
4 Rycote Lip Balms
1 Set DiGiCo Golf Balls
2 Euphonix Thermos Mugs
3 Sets Magix Crazy Talk, Movie Edit Pro, and Music Maker
1 Klein + Hummel Sonic Distance Measurer
1 Tascam Carry Case with Speakers
1 Pair AEA Earrings
1 Set Rycote Playing Cards
2 Sets Neutrik Post-It Notes & Microcloths
5 Sonifex Coasters
2 Meyer Sound Footballs
1 Set Dolby Suitcase Straps
1 SCV Bag
1 AEA Stereo Protractor
4 Genelec Acoustic Tape Measures
2 SE Electronics Dual Pro Screens

If you want a full list of swag, go to **www.audiomedia.com/swag**. We're still getting donations, so the list is getting longer…

BERLINER MICROPHONES

Capturing the Sound Of the Future!

"I absolutely love the lush, classic tone of the Yamaha C7 Grand Piano! How I capture that sound in the studio or on stage can make all the difference in the world. The Berliner CM-33's are what I count on to make that happen. They're extremely quiet and exhibit the open, accurate sound I'm looking for!"

~Clarence McDonald, *Pianist, Composer, Producer. (James Taylor, Ray Charles, Justin Timberlake, Hall & Oates, Michael Jackson)*

MODEL CM33

WWW.BERLINERUSA.COM 1-888-MIC-THIS (642-8447) • 1-208-545-0446 (fax) ©2008 Berliner USA Inc.

Neumann Celebrates *80 Years*

STEPHEN BENNETT presents a birthday cake to Neumann with 80 candles. That's a big cake. And a big history for a microphone manufacturer that has seen the best part of a century at the very top of its game.

It's the nineteen fifties, and we're in a studio somewhere in the good ol' US of A. An icon is in the making – perhaps he's an actor and a film star – and he's standing in front of a microphone waiting for the tube to warm up. The engineer gives him the thumbs up and he lays down the vocals to a classic track that wows them in the aisles even today. Fast forward to the '60s. Four mop-topped boys are ensconced around the same silver microphone model in a laboratory-like studio somewhere in London, England. The white coated technician puts the spanking new four track tape machine into record and another musical legend is born. The microphone is the Neumann U47, a tube-based classic that is still revered today as possibly the finest vocal microphone ever made. Today's stars in the ascending are often found to be belting out their passionate statements in front of the Neumann classic (before they are Autotuned to death), and it's still the first choice of those lucky enough to have access to the increasingly rare mic. Of course the company isn't just about one microphone – many of Neumann's products over the years have found friends in the recording and live sound areas, and the much-imitated U87 is probably one of the most ubiquitous sights in studios around the world. To many, Neumann is *the* microphone company, and this year, 2008, it is eighty years old.

The Early Years

The story of the Neumann microphone began in Berlin, Germany, in 1928. A young engineer, Georg Neumann, fresh from his experimentation with early capacitor microphone designs and his experience in using them in radio broadcasting, founded the company on November 23. Improving on his early designs, its first product was the CMV 3 'Bottle' microphone. This large condenser, with separate capsule and tube-based preamplifier sections, remained in production until the end of the second world war – albeit with improvements, such as variable polar patterns and exchangeable capsule heads. The success of this microphone was demonstrated by its use in the 1936 Olympiad in Berlin and the fact that its design is much imitated today. Though Neumann is mostly known for its microphones, other early successful products were a disc cutting lathe, and the rather more unexpected fields of gas-tight batteries and capacitance cells. In 1947 the company created the product that would go on to bring the dulcet tones of Frank Sinatra and the weird warbling of Kate Bush to the world – the aforementioned U47. "Neumann were always known for technological leadership, and these legendary products made their way into all the well known recording studios," says Wolfgang Fraissinet, President of Sales and Marketing.

The Middle Years

The U47 microphone was the first switchable pattern condenser microphone and its convenience and sound quality meant that it rapidly supplanted the then-standard RCAs ribbon studio microphone. Its unique design featured a dual diaphragm capsule with adjustable omnidirectional and cardioid patterns. The company went from strength to strength, developing many microphones over the years that are now considered 'must haves' by many recording studios, while the remote-switching M49, the KM53, and stereo SM2, brought the company into the emerging worlds of television and stereo recording.

The move from tubes to solid state technology also saw the birth of arguably the most famous microphone of all time – the U87. This much-copied design is probably the only microphone recognisable to non–techie types, and any studio worth its salt will have one – or a brace – in their mic cupboard. Over the years, Neumann has refined and added to this product range, while introducing along the way some ubiquitous studio technology we now take for granted – such as 48v phantom powering.

Georg Neumann himself died in 1976 and, in 1991, the company passed on its controlling interest to a competitor, Sennheiser Electronic GmbH. In 1993, the company moved to new headquarters and decided to concentrate on microphone production.

One of the big changes after the fall of the Berlin Wall and the opening up of Russian and Chinese markets, was a flood of cheaper microphones onto western markets – most of which ape classic Neumann designs. The company, however, seemed unfazed by this, responding to the competition with improvements in manufacturing processes, more competitive pricing and many new and improved products. Some of these attempts were to satiate the desire for 'new' versions of Neumann's classic designs, such as the M149 and M147 tube microphones – though as Fraissinet points out, the product names indicate these are completely new microphones and not clones of the originals. "If we wanted to recreate or remake an old microphone, such as the U47, we would only do it if we could use the original parts and circuitry, and without making any changes and alterations because of lack of components," says Fraissinet, "We make the original or we don't do it at all," he laughs. Servicing is very important to a busy professional facility; a fact that Neumann knows is important. "We still service and have parts for all our products delivered and manufactured since the 1950s," says Fraissinet, "We are still repairing and maintaining customers' valued collections with original parts."

It's hard to imagine many other companies whose eighty-year old designs are so sought after that other manufacturers are desperate to clone them. "If their goal is to copy our microphones, we must be doing something right!" says Fraissinet, "We are still the market leader in professional recording studios, so it's inevitable that people will try to recreate our designs. But we find that those customers who buy a Neumann clone will eventually realise the quality difference between the real and the fake – and a lot of people will buy a Neumann as soon as they can afford to do so."

The Present

Neumann has expanded its range into the sound reinforcement area, with products such as the KMS 105 – though people had of course been pressing the company's products into these less benign environments for years. Utilising their parent company's long experience in wireless technology, Neumann has also produced capsules for Sennheiser's SKM 5000 system, and is also heavily involved in digital microphone technology with its System D. "I believe we are now the technological leader in digital microphone solutions," says Fraissinet. "We produce the only systems that convert into the digital domain right behind the capsule, and not further down the line." He says that, as with phantom powering, the company is leading the development of standards in this area. "I'm pretty certain that this technology will find its way into the studios – we already have a number of installations, such as MTV Canada for live broadcast, and several film scores have been recorded using our digital systems."

The Future

Though eighty years old, Neumann is looking less like a doddery old codger and more like a young upstart, with upgrades to classics such as the U87ai and its digital microphone systems. The company is also planning a move back into the signal processing field – as Fraissinet explains. "In the first quarter of 2009 we will have a new Neumann stand-alone microphone amplifier. We have often been asked why we didn't produce one which would be in harmony with our microphones, and have decided now is the right time to do it." The company also has other non-microphonic ideas in the pipeline based on their past expertise. "We had entire consoles on the market for many decades, and this know-how has not disappeared – we still know how to handle a signal!", laughs Fraissinet.

Although Neumann products are still designed at the company's headquarters in Berlin, being part of the Sennheiser group has brought the company many benefits according to Fraissinet, "It has gained us access to a lot of innovative production technology and machinery, along with state of the art production facilities and a much wider distribution network. Fraissinet foresees a bright future for the company – albeit based on the traditions of the past. "One thing that is extremely important to us is honesty, reliability, and our history and tradition. These are the things that Neumann stands for, and we realise are much valued by our customers." AM

INFORMATION

Georg Neumann GmbH
+49 (30) 41 77 24 0

KRK SYSTEMS
Proudly distributed in the UK by Focusrite

SO PURE

NEW EXPOSÉ E8B AND VXT SERIES FROM KRK

Purity. Freedom from adulteration or contamination. That's what you need in the recording studio. Pure and simple uncoloured audio. KRK engineers understand this, and take great care to offer speakers that can be relied upon to deliver. The Exposé E8B and VXT series take studio monitoring to a whole new level. With an attention to detail and design expertise unmatched in the industry today KRK has truly raised the bar. Key design elements such as a sleek radiused edge enclosure with optimised airflow and minimal port turbulence, and finely tuned custom components, all ensure that the new Exposeé E8B and VXT series deliver a pure and realistic sound that is in a class of its own.

WWW.KRKSYS.COM

It's in the bag – Zaxcom's portable mixer, IFB, and multi-track machine, says STEVE MURPHY.

ZAXCOM FUSION

ENG Mixer & Multi-Track Recorder

Technological innovation in the visual production circuit has been fast and furious in the last several years. As exemplified in the blurring – if not erased – line between film and HD video acquisition, the production scene has become a welcomed adopter of an across-the-board range of new technologies, including a bevy of high-tech, on-the-set audio tools.

So… has the ENG market kept pace with its production brethren? As John Stewart says, *"not so much."* In a land oft ruled by fossilised dino-mixers that can be carbon-dated back to the early 1980s, evolution in audio tools (and attitudes) moves at a glacial pace. It is this general market – reality shows, news-gathering, independents, and other field-production work – that Zaxcom ambitiously targets with its Fusion production mixer/multi-track Flash recorder.

Features

The Fusion is the latest in Zaxcom's successful Deva multi-track hard-disk recorder line. As its name implies, the Fusion combines a number of mixing, recording, and cue functions into a fairly lightweight, highly portable package. While the other Deva units are more commonly found on audio carts in full productions, the Fusion's mirrored Compact Flash recording system eliminates the weight, moving parts, and power consumption of hard disks, positioning it well for typical PortaBrace run-and-gun work.

The Fusion measures 10.6x7.7x3.2 inches, and weighs in at 5lbs (without battery). All controls and indicators are found on its well laid-out front (or, when in a bag, top) panel, the only exception being its power switch, which is nicely tucked away on the left panel. Front-panel controls include generously large transport buttons, a number/cursor-control pad, and a set of eight dual-layer function buttons – all brightly back-lit. Also on the front is a set of eight user-assignable rotary faders, a built-in mic for use with the dedicated slate button, and the all-important 3x2.25-inch full-color touch screen that serves as the main user interface for settings and metering.

Without venturing into overstatement, the Fusion has an immense amount of mixing and routing power under the hood, which we'll look at more in-depth in the section below. To summarise here, the Fusion features 16 inputs, eight output busses, 16 outputs and up to eight recording tracks – four tracks are standard, and the unit is optionally upgradeable to six or eight tracks.

Its 16 inputs are comprised of eight mic-/line-selectable analogue inputs (on XLR) that utilise the same low-noise transformerless mic preamps found on the Deva 16, and eight digital inputs configured in four AES pairs (on DB-15). Each of the analogue inputs features selectable 48-volt phantom power, an analogue limiter and an adjustable (30 to 240Hz) high-pass filter.

The Fusion's 16 addressable outputs are comprised of six balanced analogue outputs (on DB-25), eight digital outputs in AES pairs (DB-15), plus two analogue sends to a camera via a 10-pin Hirose camera cable connector that also provides a mono-summed return from the camera's headphone amp. There is also a headphone amplifier with standard 1/4-inch stereo output derived from user-configurable presets.

The Fusion records 16- or 24-bit audio at sample rates of 44100, 47952, 48000, 48048, 88200, 96000, 96096, and 192kHz, and is capable of on-the-fly sample rate conversion of incoming digital sources up to 192kHz. Power is supplied to the unit via a standard 4-pin XLR that accepts between 12 and 18VDC (100-240VAC transformer included); alternatively, a standard rechargeable NP-1 battery can be inserted into the internal compartment power the unit when on the go.

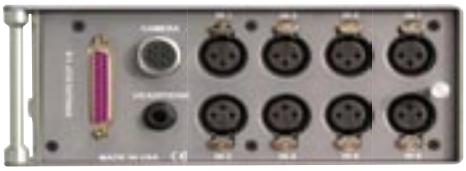
In Use

Let me state right off the bat that the Zaxcom Fusion is one fabulous, nearly all-powerful marvel of portable mix-and-record engineering. The wisdom and experience that 12 years of Deva development Zaxcom has imparted unto the Fusion is undeniable, from its highly tactile hardware faders, to its touch screen interface and near-infinite mix, recorder, and cue matrix-based routing possibilities.

It is a complex beast, to be sure, but that is because the Fusion leaves nary a stone unturned when it comes to the potential production demands it is capable of meeting. Despite the wealth of features, I found most of what I needed to be up and mixing four sources (three Sony 88s and a Sennheiser boom) to two camera tracks, and simultaneously routed the mics to four discrete internal tracks and dialed up a live-L, camera return-R phones mix without cracking the manual. Setting up the Fusion's user presets for my typical output mix, disk mix (record), and cue mix routing requirements was the obvious next step. ▸

THE REVIEWER

PAR Studio Editor STEPHEN MURPHY has over 25 years of professional recording studio, production audio, and post-production/broadcast mixing experience. He can be reached at www.smurphco.com



Truth be known, I already had a little experience on a Deva V years ago – and pretty good knowledge of pre/post crosspoint matrix routing and processing software (Lectrosonics DM, in my case) didn't hurt either – but I mostly 'used the force' and was quite happy to have found the menu system, data entry, preset storage, and navigation to be thoroughly intuitive.

I also put the Fusion to work on a variety of ENG and production gigs including at a live taping of the PBS television show, *The Kalb Report*, and a live forum called, *Battle for the Youth Vote 2008*, presented at The George Washington University in partnership with CBS News – on both of the above, I used the Fusion's discrete tracks to later post CBS and XM radio versions; I also tracked all sources during a Billy Joel performance at the National Press Club – that one just for the sport of it, since it was broadcast live.

The Zaxcom preamps were very high quality, with very little noise and a good, if not forgiving, amount of headroom. Like most, I tend not to print with processing – especially given that I'm often the one to post mix – so I didn't much explore the EQ and compression available on the review unit, but I did make good use of the adjustable HP filters and limiters on inputs as well as the bus output limiter. I must make mention of the phenomenal job Zaxcom has done with the Fusion's shielding and balanced circuitry – in one instance, a proximate Blackberry sent interference straight to my phones, yet not a blip was registered on the output mix feeds, or on the recorded tracks.

Despite using the Fusion to simultaneously record multiple sources to discrete tracks (mirrored between its internal CF card and an external Avastor hard drive via the Fusion's built in FireWire interface), mixing to a real-time DVD recorder in stereo and outputting two different cue mixes, in the context of the Fusion's total capabilities, I was still in meat-and-potatoes land.

To illustrate, in my work I had no cause to take advantage of the Fusion's multiple digital input SRCs, configure custom metering screens, or craft embedded scene/take/notes metadata (beyond simple naming and frame rates), take advantage of its full-featured TC interface (beyond Record chase) or its user-configurable GPI triggering. In my spare time I did manage to branch out to some other features, including M-S monitoring, assigning a quad-mic surround set to one fader, and even plugging in a USB keyboard for faster data entry.

Conclusion

One could mount an argument that its high price tag (especially when outfitted with optional cables, batteries, effects, and eight recording tracks), or its 300+ mixer cross points and 200+ user parameters (as highlighted in Zaxcom lit), make the Fusion overpriced and overkill for the target ENG market. In the opening, I mentioned the glacial pace of evolution in the adoption of new ENG audio tools. I specifically referenced attitudes, which are often correctly and/or necessarily based on, 'if it ain't broke', 'the need for speed', and, of course, tight budgets – you can connect those dots.

That said, there most definitely is a market for this stunning mixer/recorder; I'll just self-revise it to start at the rental house and reality show level and then upwards into financed independents, 2nd and 3rd film units, and any other full production units where mobility, flexibility, and centralised audio control are essential. In those applications – and including those requiring high-resolution surround recording – the Fusion truly has no equal.

INFORMATION

£ **US$7,995 (base list)**

Ⓐ **Zaxcom, Inc., 230 West Parkway, Unit 9, Pompton Plains, NJ 07444, USA**
Ⓣ **+1 973 835 5000**
Ⓦ **www.zaxcom.com**
Ⓔ **info@zaxcom.com**

Ⓐ **UK Distributor: Everything Audio Ltd.**
Ⓣ **+44 (0) 208 324 2726**
Ⓦ **www.everythingaudio.co.uk**

video guide

A Sound Pro's Guide To Video

Camera Support & Movement Part 2

KEVIN HILTON takes a last look at the freedoms and advances in picture that camera hardware has meant for the film industry.

The moving camera has become an integral part of film and programme making, creating atmospheres, tension, pace and moods on screen, and stirring emotions within the audience. With camera movement an established part of the filmmaking lexicon, Directors and Directors of Photography (DoPs) have used increasingly sophisticated technology to mount ever more elaborate moves, but the fundamental principles behind all this remain the same.

The early colour cameras were massive, but had to be to accommodate the 25AAA stock, consisting of three strips of film for each primary colour. Black and white cameras were hardly miniature and in all cases, Directors had to rely on the ingenuity of their grips (the technicians in charge of equipment and scenery) to build specialist support gear as there was not as much purpose-built hardware available commercially as there is now.

Dimensional Resource

The evolution of cameras has given as much freedom to filmmakers as the various stands and supports now on the market. A major breakthrough was Eastman Colour, which uses only one strip of film through the camera and led to smaller housings. Film stocks got faster, allowing more location shooting in low light situations and this, combined with the right support hardware, changed the way films are made; Scorsese's *Taxi Driver* (1976) as we know it today might have looked very different without these advances. Many DoPs are certain that the new digital cameras, such as the Panavision Genesis and Arri D-21, are the next liberating step.

After getting more horizontal movement thanks to dollies and tracking, filmmakers looked at the vertical for ever more dramatic angles. The hydraulic lift on most pedestals gives a fair amount of height in a move known as pedding. This allows the field of vision to be raised or lowered while maintaining a steady, level picture but only goes so far. The high rise equivalent of both pedding and the dolly is the crane shot, achieved by using a big camera trolley fitted with an extending arm or boom. Some cranes support just the camera and are remotely controlled by either mechanical or electronic means; others have a platform large enough for the Camera Operator, the Camera Assistant, and sometimes the Director, as well as the camera.

The first crane developed for movie making is widely regarded as the one used on the 1929 backstage melodrama Broadway. This reputedly massive construction was designed by the film's Director, Hungarian-born Pál Fejös, who had experimented with other forms of camera movement in the earlier *Lonesome* (1928). Since then, craning shots have been used to great effect in films of all styles and genres, from early horror in *Bride of Frankenstein* (1935) to the almost experimental work done by Gregg Toland for Orson Welles' *Citizen Kane* (1941) and coming right up to date with the all-action high shots for *Quantum of Solace*.

Cranes range in size from fixed units with a relatively low height capability to larger models that can reach 20-feet and above. The basic design is the same: the camera mounting or platform at one end of the pivoted boom, with counter-balance weights at the other. Among the leading manufacturers of cranes to the film industry are Super Technocranes and Technocrane; JL Fisher, noted for its microphone booms, produces pedestals and dollies, with many of the latter being able to support a jib for high shots. Small cranes are known as Tulips, and the Jimmy Jib company manufacturers a range of smaller arms fitted either to a tripod or a dolly.

Somewhat confusingly cranes are occasionally known in film business slang as 'whirlies', which is a little too close to the old nickname for helicopters, 'whirlybird'. The helicopter plays a part in filmmaking when an even higher angle shot is needed, or to track cars moving below. Ordinary movement introduces enough judder and shaking into a shot but putting a camera on any kind of aircraft increases that considerably. A number of stabilization systems are available to take the shake out of heli-shots, many using gyro technology. The leading designers of these systems are Wescam, Flir Ultra Media, Bob Netmann, and Cineflex.

Another way to get a sense of flight but without the great expense or danger of actually getting into a helicopter is to use a flown wire-mounted camera. In the most fundamental form of this system the camera rig is suspended between four wires in a studio or other space. These are connected to winches controlled by a computer programmed to recognise, and so avoid, areas of the set where actors or scenery will be.

Handheld Options

Back on the ground filmmakers and equipment designers have striven to make the view from a camera look as much like a human's perspective as possible. Having the operator hand-hold, often using a special frame, the camera comes close to this. The technique was used more for documentaries and news in the early days of film and TV but drama has co-opted it, to the point where the shaky style of camera and finding focus, zooming in and out before settling on a shot, is now commonplace in both genres.

Cinematographer Gilbert Taylor developed his technique for handheld cameras through working on the wartime drama-documentary *Journey Together* (1946) before using it for *The Dam Busters* (1955), Kubrick's *Dr Strangelove,* and *A Hard Day's Night* (both 1964). The trick, he says, is not to hold the camera still but to let it 'breathe' with you, to move with it. An outstanding example of hand-held camera work is *I Am Cuba*, the 1964 ▸

SOUND PRO'S VIDEO GLOSSARY

Canting

This is when a camera is angled wildly away from the usual vertical and horizontal axis of a picture frame, so the subject appears to falling to one side. This is achieved by simply moving the camera on its pedestal head but the effect is dramatic. Canting is often used to convey disturbed thoughts in the mind of a character or presages someone's downfall, as it does for Orson Welles' Harry Lime in *The Third Man* (1949). It also has a wild and wacky side, being a regular motif in the campy 1960's TV version of Batman. This camera move was once commonly known as a Dutch angle, but as many old slang terms involving the Netherlands are derogatory in nature (Dutch auction, to go Dutch), canting is now the preferred term.

Camera Support & Movement: Part 2

news

During this year's IBC Mark Roberts Motion Control expanded its range with the SFH-30 head pan tilt head, featuring new tools and operator controls. This was joined by a motion-controlled linear motor, which is designed to work with high-speed cameras. This can reach speeds of four metres per second, and combines high-speed camera shooting with motion control. Also on show were the Modula and Talos rigs and the Ulti-Head.

Russian-made film with the continuous opening shot in which the camera was passed from person to person.

Handheld cameras give a sense of intimacy, immediacy, and of being part of the action – both for documentaries like DA Pennebaker's Dylan profile *Don't Look Back* (1967) and Cinematographer-turned-Director Haskell Wexler's doc-style drama, shot on location at political conventions, *Medium Cool* (1969) – but the danger is that the uneven movement can overwhelm the story and leave the viewer feeling annoyed or seasick – or both.

Ready Steady

The ideal was something that mimicked a person walking but which produced a rock-solid picture. The breakthrough came with the development of harnesses worn by the camera operator. These contain gimbals that keep the camera steady but can be moved in most directions. The pioneering example of what became known as the fluid camera was John Carpenter's Halloween (1978), which used the Panaglide, a stabilisation system of two articulated, shock absorbing arms attached to a vest worn by the operator.

This was superseded by the all-conquering Steadicam, which first appeared in 1976, and is similar, but has a single arm, a series of counter-balances, and a free-floating gimbal supporting the camera. Shots using this device are largely associated with the horror genre – Kubrick's *The Shining* is a chilling example – but it is used for any type of subjective shot and is now a standard part of television sports coverage.

The Steadicam range has grown over the years to accommodate cameras of different sizes and weights, down to DV camcorders. Rival systems have appeared, including the Glidecam and the HandyMan from ABC Products, which also produces cranes and dollies. Director Mike Figgis is noted for his use of DV in features and wanted a camcorder support that allowed greater movement. Figgis had a picture in his head of what he wanted, which was realised by industrial designer Ben Wilson, who had made helmet camera supports for shooting skater films. The Fig Rig was born. Wilson says the intention was not for the Fig Rig, which is produced commercially by Manfrotto, to be a 'junior Steadicam' but for it to be a 'low-tech handle' for a camera.

Slick Mover

Technology has given cameras even greater movement, and in recent years, much of that has come from computer-driven hardware in the form of motion control systems. A camera is mounted on a remotely controlled pedestal running on tracks, either on the floor or suspended from the ceiling, which can be programmed to repeat pre-set movements. This is especially useful for scenes featuring visual effects, but the technology is also used to create seamless moving camera shots.

The first motion control systems were developed during the mid-1970s for effects heavy films directed by technologically aware directors. The Dykstraflex was designed by John Dykstra and his colleagues at Industrial Light and Magic for George Lucas' *Star Wars* (1977), while another visual effects pioneer, Douglas Trumball, worked with Future General Corporation on the Icebox system, used for Steven Spielberg's *Close Encounters of the Third Kind* (also '77). Coming in the wake of this pair, both technically and artistically, was Disney's *The Black Hole* (1979), which featured ACES (Automatic Camera Effects System).

Among the leading exponents of the technology today are Mark Roberts Motion Control (MRMC), Kuper, and Mo-Sys. MRMC systems appeared during the 1980s, and the range now includes motion controlled cameras, cranes, and dollies. The Milo system is in everyday use for commercials and feature films. American developer Kuper, produces a software program for motion control, which is supported in the UK and mainland Europe by Tech Mechs FX. The Denham-based company offers a range of motion control packages that run under the Kuper software and are often used in conjunction with General Lift booms, arms, and supports. These were used on *Dead Ringers* (1986), another outstanding example of motion control, which allowed two Jeremy Irons to be convincingly on screen at the same time.

The Mo-Sys system was designed to be straightforward so the DoP and supporting crew could concentrate on their main jobs, and not spend too much time making the motion control work. The company also develops tracking systems for broadcast, and a 3D inserter, and has approximately ten motion control units in Hollywood right now.

Motion control systems require additional equipment, such as booms and head controllers. MK-V, founded by Steadicam operator Howard J Smith, manufacturers camera support systems, including shed platforms for Steadicams, and the Revolution, a gimbal device that comes in a number of models, including Powered and Manual, which can work in conjunction with motion controllers. The RevolveR from Jackson Woodburn is a mechanical head that allows a standard camera unit to become a motion control system. Offering gear ratios from 99:1 down to 1:30 up, in 0.1 steps, RevolveR can achieve eight axes of movement, with transparent interfacing to Preston lens systems.

Camera supports and the movement they bring have given filmmakers great freedom over the years and been behind numerous outstanding cinematic moments, but they are in many respects the gilding on more fundamental skills. Next month the Video Guide will look at light, the medium with which cinematographers create pictures.

ibs
The Institute of Broadcast Sound
Residential Training Weekend
16 to 18 January 2009
The Fire Service Training College
Moreton-in-Marsh, Gloucestershire

If you want to continue your professional development in sound, the annual IBS CPD weekend is the place to be. This year the subjects covered will include communications systems, recording in surround, drama and Foley, production workflows, monitoring and metering, digital radio mics and RF. All accommodation and meals are included.

To book online and for more details go to **www.ibs.org.uk**

You can also book by phone by calling 0300 400 8427 (Option 1)

skillset

DiGiCo SD8

THE ONLY CONSOLE THAT TICKS EVERY BOX

AUDIO MEDIA 2008 Gear OF THE Year

	FEATURE	DiGiCo SD8	OTHER
▼0	Complete with 48/8 Stage Rack with 100m Digital MADI snake	✔	
▲2	Unlimited application areas	✔	
▲4	Exceptional cost to feature ratio	✔	
▲6	Up to 60 mono or stereo channels with full processing (equal to 120 channels of DSP processing)	✔	
▲8	24 mono or stereo busses + Stereo Master with full processing (equal to 50 busses of DSP processing)	✔	
▲10			
▲12	On Board local I/O with 8 Mic/Line inputs, 8 Line Outputs and 8 AES I/O	✔	
▲14	Open format & platform recording	✔	
▲16	12x12 Matrix with full output Processing	✔	
▲18	6 stereo floating point FX processors	✔	
▲20	2 independent solo busses for monitoring	✔	
▲22	Snapshot cue control with crossfade	✔	
▲24	37 touch sensitive faders for instant control	✔	
▲26	Touch screen control	✔	
▲28	Full worksurface precision metering	✔	
▲30	Networking and remote control	✔	
▲35	Floating point processing	✔	
▲40	Future proofed FPGA audio core	✔	
▲45	Remote studio grade mic pre's	✔	
▲sp	MADI connection	✔	
	USB compatible for session saving & transfer	✔	
	Offline & online session control	✔	
	DiGiCo high grade processing and audio path	✔	

www.digico.org

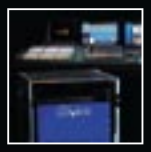
TOURING • INSTALLATION • THEATRE • SYSTEMS INTEGRATION • PRODUCTION

AUDIO MEDIA

Sound Reinforcement

AMSR News **62**
Technology, application, and installation news from the global sound reinforcement community

Midas PRO6 **64**
SIMON ALLEN gets his hands on the small, but perfectly formed Midas PRO6.



Product Sampler: Line Arrays **68**
Audio Media presents a selection of stocking fillers sure to satisfy even the greatest of novelty-footwear stuffing enthusiasts.

Extreme Live **70**
DAVID MACKENZIE gets funked up backstage on Extreme's reunion tour.

AMSR is the regular AUDIO MEDIA Sound Reinforcement section, aimed squarely at SR professionals across Europe. Following the *Audio Media* ethos, the emphasis will be on the product reviews and technical features written by working industry professionals that anybody in SR will find relevant and useful.

The 2008 Yokohama Triennial, Japan's international celebration of contemporary art, displayed an interactive piece by British artist Cerith Wyn Evans. The installation was based on directional audio technology. Evans collaborated with Holosonic Research Labs to hang Audio Spotlight directional speakers on reflective discs, attached to a web of rotating mobiles. The effect was a whirlwind of sound unique to each listener, described by the Audio Spotlight's creator Dr. F. Joseph Pompei as "very well aligned with the original intent that I had for the technology."

www.holosonics.com

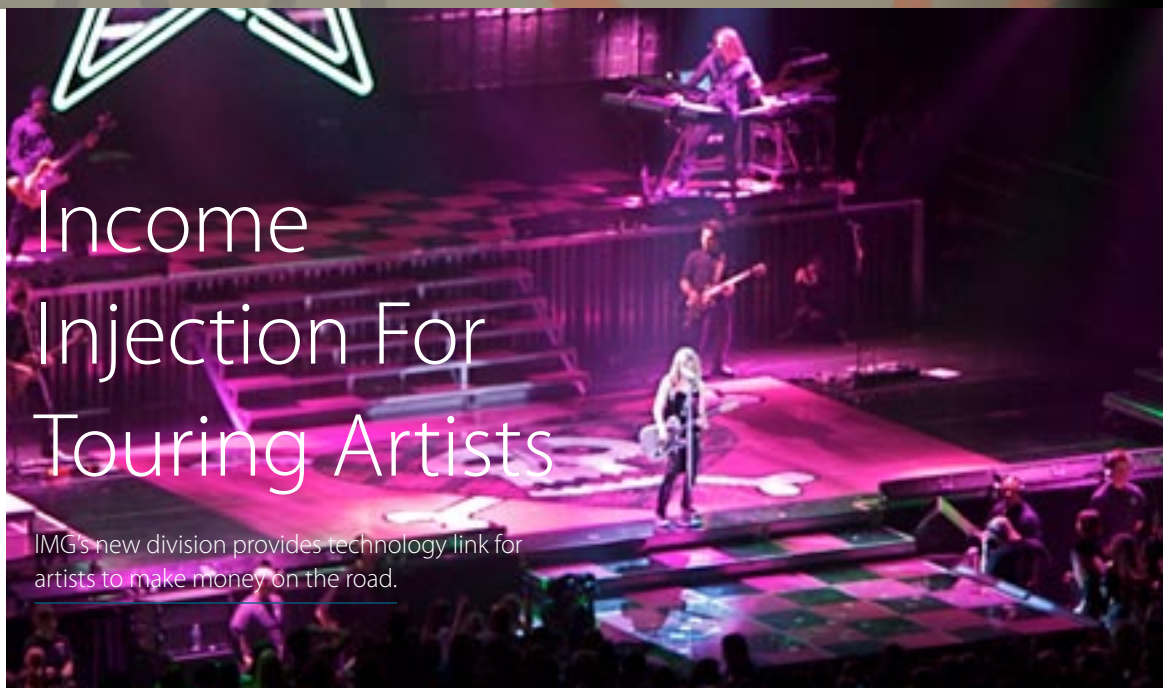
British electro-dance group Goldfrapp recently performed at the Sydney Opera House, during their current Australian tour. System Tech Justin Arthur's system for the iconic venue combined Adamson Y-Axis line array modules with a Digidesign Profile at FOH. Arthur commented that the venue was almost acoustically perfect. "If I had to find a problem, the only thing that comes to mind is that the room is so live," Arthur commented, "But that clears up as soon as the room is filled with punters."

www.adamsonproaudio.com

The world listened as President-elect Barrack Obama delivered his historic acceptance speech to nearly 250,000 supporters in Chicago's Grant Park. Sound design for the event was provided by Clair Chicago, and featured Midas consoles with an Electro-Voice X-line PA. The system supported an unprecedented 720 press feeds. Director of Event Management, Ian Hunt commented: "Using analogue was great because it really added depth to Obama's voice, and imparted gravitas to his words. It was wonderful to hear him through the Midas preamps."

www.electrovoice.com

www.midasconsoles.com



Income Injection For Touring Artists

IMG's new division provides technology link for artists to make money on the road.

As record sales and label support declines, artists are increasingly looking to the road for revenue. In response to this growing trend, show-technology company LMG has spawned a new division of its company to provide solutions to artists seeking to increase their touring income.

The new touring division was born out of LMG's support for Avril Lavigne's *The Best Damn Thing* world tour, mixed by the company's veteran touring engineer Jim Yakabuski. For this – and subsequent tours, LMG engineers can draw upon an inventory that includes Digidesign Venue systems and associated DSP plug-ins, d&b audiotechnik, L-Acoustics, Meyer Sound loudspeaker systems, and Pro Tools HD systems with Glyph drives. The company's video systems include Snell and Wilcox Kahuna switchers, and Thomson Grass Valley HD camera systems.

Besides providing conventional tour-support services for sound, lighting, and video systems, LMG also offers worldwide distribution of live content, to generate extra cash for performing artists. Their set-up includes redundant, integrated Pro Tools HD systems and large-capacity Glyph drives, allowing engineers to record every show without a remote truck. They can also webcast shows live, via satellite Internet.

The company aims to help artists put on spectacular shows whilst producing lucrative HD recordings, webcasts, videos, and artist chats. "Our strategy is to bring artists advanced, integrated systems that will not only save them money but help generate additional income," explained LMG's Director of Touring, Steve McCale. "Our solutions are not simply an improvement over the way shows are done; they are a game changer for performing artists."

LMG Touring
+1 800 226 3100
www.lmgtouring.com

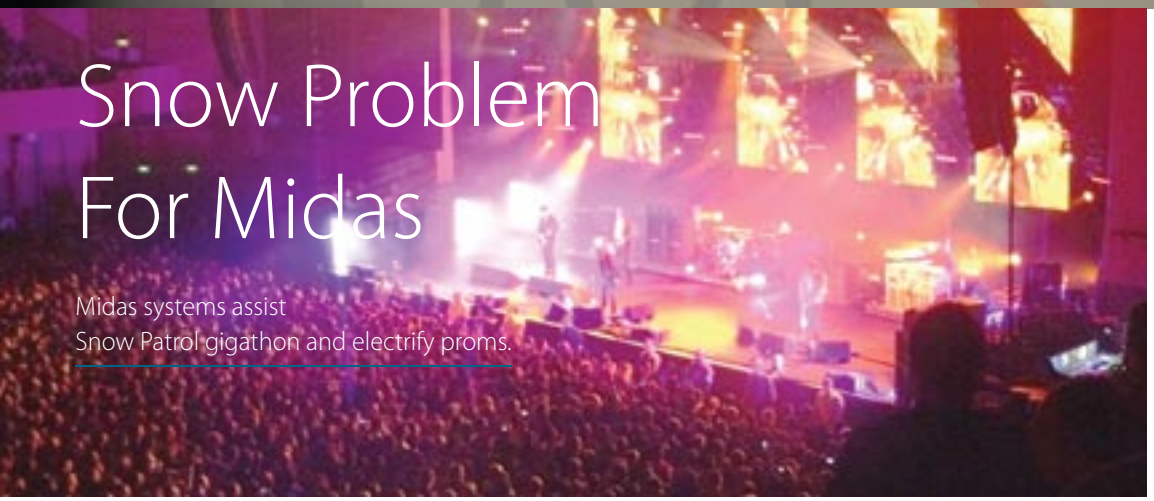
Let there be sound

Pope Benedict XVI recently made his first visit as pontiff to Paris, praying together with more than 250,000 followers on the lawns of the Esplanade des Invalides. Sound designer Fred Goguet was responsible for the mammoth audio system required for the event.

Goguet's design comprised 96 MICA, 78 M'elodie and 20 MILO line array loudspeakers, with a side of UPA-1P and UPM-1P loudspeakers. His design was influenced by limited heights and the absence of scaffolding, leading the designer to create a system of 22 main, and 10 secondary arrays.

Marc de Fouquières of French audio firm Dispatch observed that the main challenge of the project had been overcoming the limited time allocated to sound-check the system. "We didn't have much time to listen to and fine-tune the arrays once they were in place," commented Fouquières, "So we configured most of it beforehand in the MAPP Online Pro acoustical prediction program, which proved to be exceptionally accurate. Also, with the SIM 3 audio analyser, we were able to compensate for how the crowds would change the acoustics, and our work during the service was made a lot easier."

Meyer Sound Laboratories
+1 510 486 1166
www.meyersound.com



Snow Problem For Midas

Midas systems assist Snow Patrol gigathon and electrify proms.

At 1.00am on Sunday October 26, in Dublin's Gate Theatre, preparations began for a performance by a five-man band from Glasgow. Over the following 48 hours, Snow Patrol would go on to complete four gigs in four cities: Dublin, Belfast, Edinburgh, and London.

The concentrated mini-tour featured a Midas Heritage 3000 at FOH, Midas Pro6 Live Audio System on monitors for the first three shows, and an XL8 Live Performance System for the final gig in London.

The BBC's Electric Proms season continued the Midas-fest, with a host of consoles arriving at The Roundhouse in Camden. These consoles were employed for headliners including Oasis, The Streets, and Burt Bacharach.

Engineer to The Streets, Shan Hira was impressed by the performance of the XL8. He first used the console for the Chemical Brothers at this Summer's T in the Park. "This is the best sounding console available, without a shadow of a doubt," he commented. "You can't drive other digital consoles like you can this, especially with the dual gain feature, which gets you where you want to be."

The balance of an analogue feel and digital extras was an attraction for Hira, who saved settings from rehearsals, used the XL8's onboard dynamics, and even created scenes for each song in the set.

Midas
+44 (0) 1562 741515
www.midasconsoles.com

Kaiser Beef

The Tuborg GreenFest is a mainstay of Eastern Europe's festival circuit. Having grown significantly since its conception three years ago, the 2008 GreenFest Tour visited Moscow, St Petersberg, Belgrade, Sofia, and Zagreb.

The Zagreb line-up saw performances from the Kaiser Chiefs and a host of local synth-pop and electro groups. Headliners Kaiser Chiefs were described as the 'meat' of the one-day festival's line-up.

Tuborg, Live Nation, and Exit Festival organisers State of Exit chose Croatian rental company Lite Prom to provide a Turbosoud loudspeaker system for the event.

"We used 24 stacks of Aspect in total," explained Lite Prom's Zeljko Radocaj. "This was augmented with four TSW-218DP and six of Turbosound's new self-powered Flex Array TFA-600HDP, which worked perfectly for this situation. Stage monitoring was from 14 TFM-450 wedges and a TQ-425SP was used for drum fill."

Turbosound's Sales Manager Paul McMullan was pleased with the performance of his company's products.

"We've had some great feedback from those involved in the festival," claimed McMullan. "This was a good demonstration of Flex Array's versatility, and how well it integrates with Turbosound's other product lines. It was also the first major outing for the new TSW-218DP subs – a digitally self-powered double 18-inch horn-loaded sub-bass cabinet and our most powerful sub to date – and we were very pleased with the results."

Turbosound
+44 (0) 1403 711447
www.turbosound.com

London's Britannia Row Productions handled the sound for Oasis' November UK tour. At FOH, the company supplied an Outline Butterfly system consisting of 82 elements, supported by 30 Subtech 218s. The system was digitally controlled by Dolby Lake processors and amplified by Outline T9 power amps.

System Engineer David Lombardi was pleased with the performance of the system. "I consider the Butterfly a perfect system for arena tours. Small and easy to rig, but with a big beefy sound and plenty of headroom."

www.outline.it

Allen & Heath has announced the forthcoming release of its new digital I/O expanders for the iDR digital installation series. Exhibiting at Integrated Systems Europe from February 3-5, 2009, the company will display the new units, which provide expansion options of up to 250m on CAT5 cable using the AES/EBU protocol. The iDR-8 and iDR-4 mixing processor units currently use analogue interfaces. The decision to go digital was made because of an increasing demand to keep all audio interconnection in the digital domain.

www.allen-heath.co.uk

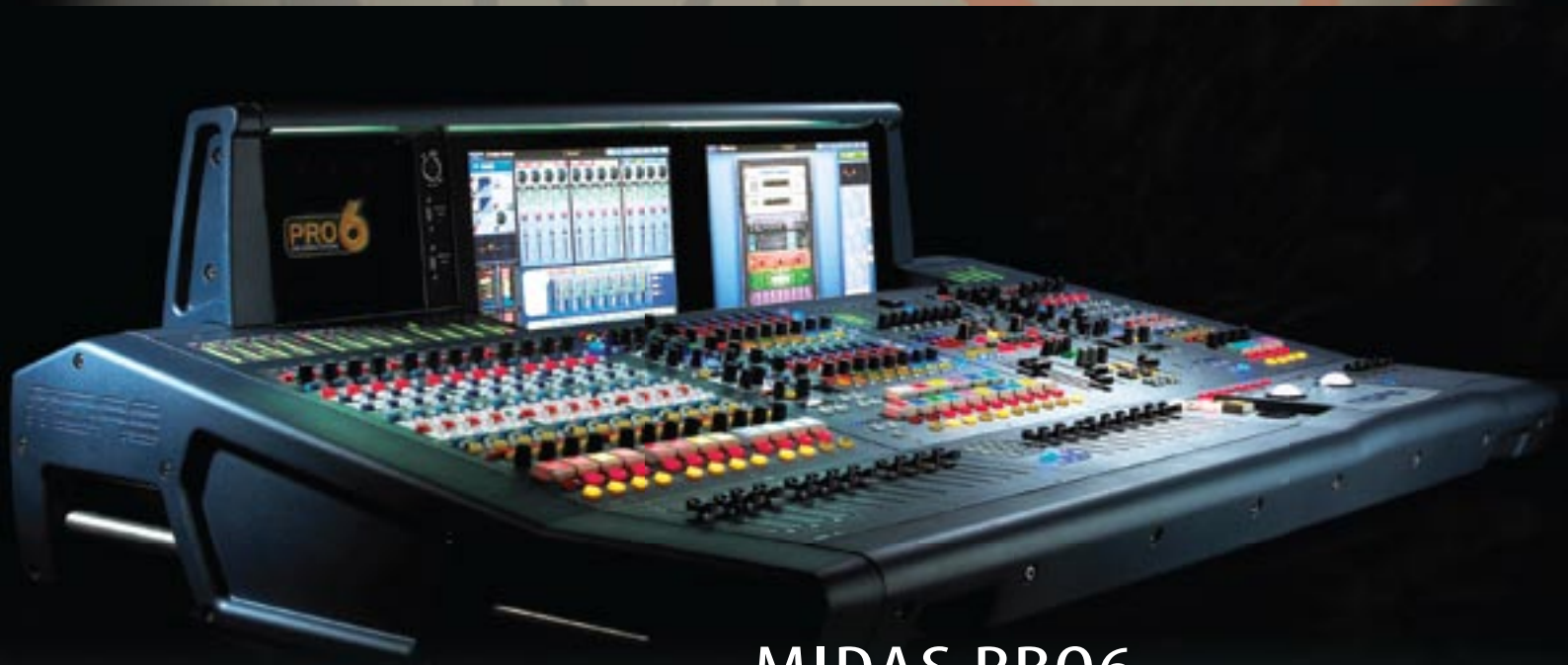
QSC Audio Products has announced two new additions to its Digital Cinema Speaker Series for small theatres; the SC-2150 and SR8100.

The SC-2150 is a three-way, selectably passive full-range or bi-amplified screen channel loudspeaker comprised of two main units: a mid-high frequency system, and a low frequency enclosure.

The SR-8100 cinema surround loudspeaker features an 8-inch, low-frequency transducer coupled with a 1-inch soft dome tweeter.

The system's MDF enclosure incorporates a 15° down-angle baffle, and easily accessible top-mounted terminals.

www.qscaudio.com



MIDAS PRO6

Live Audio System

SIMON ALLEN gets up close and personal with one of the major launches of 2008: the hotly anticipated PRO6.

The Midas PRO6 is here, and here to stay. This has been a very eagerly awaited release, and I can see why. It is safe to say that the PRO6 will have a strong position in the market, and initial sales and responses are good. This more affordable brother of the Midas XL8 is compact, but not compact in its functions, as I discovered when I visited the purpose-designed demo facility at Midas HQ in Kidderminster.

Overview

At first glance the console is a dazzling array of colour, and the prominent illuminated logo makes the PRO6 stand out and be very recognisable. This is the second networked digital audio system from Midas. Employing technologies from its flagship model the XL8, the PRO6 offers the same sample-synchronised audio performance in a compact package with that Midas sound.

The system comprises of the desk itself, which really acts as one large remote control, and two 7U rack space units handling all the DSP and I/O. The I/O unit is completely configurable to whatever array of ins and outs are required, but the standard system provides 56 channel inputs, eight returns, and digitally: 41 busses, initially configured as 16 auxes, 16 matrix, three masters, and six solos. As the I/O hardware is all AES50 networked, the system can soon be increased to connect 264 inputs and 264 outputs, which should be enough. The other great news is that the hardware for the XL8 and the PRO6 are compatible. The desk itself also offers some changeable audio I/O cards to allow audio connections at FOH position if the racks are located on the stage.

The whole system has that inevitable feel of Midas high quality about it, and the company has worked hard on fail-safe ways of protecting the show! The connection between the desk and the racks are two lots of 100m digital snake using Cat-5e copper cabling: one master, and one as a spare. There is an optical option for further distances. Inside the console there are two Linux-based computers, and should one fail, the other can run the desk through the rest of the show. There are also redundant power supplies for back-up, so the PRO6 really is ready for the live sound environment.

The console has 16 input channel faders, 12 on the left and four on the right, with master faders and auxiliary masters in the middle. Even though this is a digital mixer with two daylight viewable screens, the layout and manual feel is very much based around familiar analogue lines for intuitive operation. This is a massively capable piece of kit that is all singing and dancing, but it is designed in a logical manner. To move up and down the endless channels or busses and auxiliaries, there are simple navigation functions, as well as the now common VCA method of working.

The pots work on direction and speed of turn to alter values rather than being simple encoders with only so many positions. This really does give the feel of Midas' heritage in analogue mixers. The pots are also touch sensitive. As you touch them they become more noticeable on the screen with relevant information, such as dB value, giving the operator a 'heads up' approach to mixing. You can look at what you're mixing, and not get involved in the gear. I actually think that because you are always looking at the same place on a screen in front of you rather than all over the mixer, and different bits of outboard gear in different places, and so on, that once you become used to it, it might actually make you more involved with the stage than a wholly analogue approach. It's a little like choosing between ▸

prismsoundrecording

Ὀρφεύς

Orpheus - the ultimate professional FireWire audio interface by Prism Sound

THE **ULTIMATE** PERFORMER

With unbeatable sound quality, state-of-the-art clock technology, low-latency, flexible monitoring for control room or foldback...

...Orpheus by Prism Sound is the professional's choice.

PrismSound

Contact us now to arrange your demo

www.prismsound.com/orpheus

+1 973 983 9577
+44 1353 648888

Email: sales@prismsound.com

having your car's speedo on the dashboard, or in your lap.

All of the coloured backlights on the controls are user definable, making the desk work for you in a recognisable way. Track names are also editable with an external keyboard, so no need for tape any more. The approach Midas took was to use colour as a way to help you guide yourself around the mix so you can grab the correct control as needed without thinking about it.

THE **SYMPHONY** SYSTEM

The Most Powerful Audio Workstation Available

The Symphony System combines Apogee's legendary X-Series and Rosetta Series converters with Apple's revolutionary Mac Pro and Logic Pro audio workstation using the 32-channel Symphony PCI card.

BEST SOUNDING

The most sonically advanced audio hardware interfaces combined with the most advanced music creation and production tool.

HIGHEST PERFORMANCE

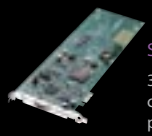
1.6 milliseconds at 96k and up to 192 simultaneous channels of audio.

GREATEST VALUE

A fraction of the cost of popular card-based, DSP systems.

Introducing Logic Studio

A suite of powerful, easy-to-use music creation and production tools, Logic Studio gives musicians everything they need to write, record, edit, mix and perform.



Symphony PCIE Card

32-Channels of I/O per card & up to 96 channels per system.

The Total Package

Apogee Sound Amazing

Authorised Distributor

0845.500.2.500

www.sonic-distribution.com

SONIC DISTRIBUTION

The colours are big and bold, and the well-illuminated controls and screens make the desk fit for indoor and outdoor use. There are 10 VCA groups that are individually accessible from the centre of the main control area, which are very easy to assign channels to by holding down the selector buttons. This also provides a better way of navigating through the channels.

Compact is the name of the game here. Everything you would ever need for any show can be found inside the PRO6, from automation, to 5.1 surround sound panning, to plenty of effects and reverbs, to several compressors, EQs, and graphics. This allows easy load in and load out for quick and easy set up. Show settings can be saved on an external USB memory stick for efficiency and consistency in your sound every time. Show settings can also be loaded on either the PRO6 or the XL8 making life easier for touring engineers. Midas has written all of its own algorithms for their Linux-based operating system, spread across two internal computers each with dual core processors. The effects and compressors etc are modelled on well-known devices, so no need for all of your outboard. All the audio sampling is done at 96kHz, 24-bits, any signal processing is done at 32-bits, and the system automatically compensates for any digital delay, so you don't encounter phasing with any number of plug-ins you may use.

In Use

I managed to find my way around this desk to a level of confidence gig-ready within only a few hours. I think for experienced digital desk users, the move to the PRO6 would be an easy transition, and it would just be a case of finding where everything is; whereas for analogue engineers, they should not be afraid, as it is very intuitive.

The only issue I had was getting out of habits from other desks. In particular I am very used to Pro Tools on a MacPro, with dual screens and the pointer going straight from screen to screen. The PRO6 has two screens but as they look after different jobs and are run from separate computers, there are two tracker balls. At first I did find it odd, but as I started to get more used to the functions and where they were, I stopped thinking about it. You also find that once any setting up has been done, most of the mixing and any work that is done during the show is via the hardware controls, and you tend not to touch the mice.

All the software, effects, and graphics have been

written by Midas for this desk, and go together well. It is easy to go in and find anything you want to adjust as you're working, as everything has a direct display access button.

The EQ on the input channels is a four-band parametric EQ, which is easier to use than some analogue desks, and you can make it do exactly what you want. The only drawback for me was not having a complete four-band EQ control section, but just control over one band at a time, then scrolling to the next, which was part of the attempt to make the PRO6 as compact as possible.

On each input channel, you also have a choice of four excellent compressors, which was worth the trip for me alone. Alex Cooper at Midas, who is behind the sound of all the compressors and effects in the PRO6, has done the most amazing job. The compressors are very different, and nine times out of ten it is obvious which one to use for what application. They have been modelled on high-end compressors, and sound great. As part of the dynamics there is also a gate for each input channel too.

One of the biggest factors that will help the PRO6 stand out from the crowd is the great job Midas has done ensuring the sound is that well known Midas sound. Everything analogue on the system and the way the DSP sounds is very replicative of the famous forerunners. For instance, if you drive the pre-amps hard, then all you get is pure analogue distortion without digital clipping, so you can still use Midas pre-amps to get your sound. As I said, the EQ and dynamics are stunning, but the effects really bring home that this is a live desk. The reverbs sound brilliant and even though they are emulations of many different types of reverb, such as room, plate, hall, and so on, they all sit in a space that I could hear would translate to a large PA very well. It was as if there was a third dimension to them that wouldn't cloud up your mix, but could also be very forthright in its effect.

Conclusion

This really is as great as we were all hoping it to be. I think the Midas PRO6 will suit so many applications, and its ease of use will make it the favourite more often than bigger consoles like the XL8. All the current digital mixing manufacturers are claiming their console is easy to use even for analogue engineers, and whilst they might be intuitive, the Midas PRO6 is certainly the most analogue-familiar that I have used, possibly because of its roots. The desk looks great and feels of high quality, but most importantly, the sound is there. It has that Midas sound, and with its excellent DSP plug-ins and reverbs, it suits the live environment really well. It seems as if Midas has thought of everything in this system, but time will tell. AM

INFORMATION

£ GB£/US$ - TBA

Ⓐ Midas Europe HQ, Walter Nash Road, Kidderminster, Worcs, DY11 7HJ
Ⓣ +44 (0) 1562 741515
Ⓕ +44 (0) 1562 745371
Ⓦ www.midasconsoles.com

Line Arrays

Line array systems have become a standard in the full range of venue applications, prompting manufacturers to release modules in a variety of dimensions. Between the size and scalability of any given array, significant flexibility now exists when planning your system. With this in mind, *Audio Media* presents a selection of the latest offerings from across the scale-spectrum, from micro to massive. Just spare a thought for Santa before adding any of the latter to your Christmas list – you may need to size-up your stocking.

Adamson Systems Engineering's Y-10 is a powerful sub-compact 3-way line array, featuring a single patented Adamson mid/high drive module. The Adamson drive module has a co-axial entrance and a co-linear exit comprised of a high frequency sound chamber mounted within a mid frequency sound chamber. The drive module is powered by a proprietary 9-inch Kevlar mid and a JBL 2451 compression driver.

www.adamsonproaudio.com

Alcons Audio claims that the LR7 possesses the industry's best throw to size ratio. The micro pro-ribbon line array gives 1:1 high-output sound reproduction and weighs in at just 8kg. Loaded with the RBN401 pro-ribbon driver on a 'Morpher' lens with up to 94% frontal radiation, the system features a 90-degree or 120-degree dispersion of choice with seamless coverage, due to the ribbon's all-natural cylindrical wavefront.

www.alconsaudio.com

Bose Professional Systems' 300W Panaray MA12 Modular Line Array Loudspeaker comprises a vertical line array of 12x 2.25-inch drivers to reproduce the complete critical vocal range with no crossover. Designed for use in single and multiple configurations in permanently installed indoor applications, its slim cabinet and choice of black or white finish make the system discrete.

www.pro.bose.com

Das Audio's Aero is a series of compact line array systems for medium-scale sound reinforcement applications, such as theatres and houses of worship. The Aero 38 is an externally powered, medium format module that integrates low, mid, and high frequency transducers in a single unit. The module incorporates two 12 GNC loudspeakers, two 10LMN16 10-inch cone transducers, and one ND-10 large format compression driver.

www.dasaudio.com

D&B Audiotechnik's J-Series is aimed at large-scale sound reinforcement applications. It consists of the J8 and J12 loudspeakers, in addition to the J-SUB cardioid subwoofer, that are acoustically matched and constructed to be mechanically compatible both in flown or ground-stacked arrays. Both the J8 and J12 deliver a 48/85kHz-17kHz frequency response. The J8 features an 80-degree horizontal dispersion, and the J12 120-degree.

www.dbaudio.com

Dynacord's Xa-2 systems incorporate new Constant Q horns, patented planar waveguide bass horns, and neodymium components. The FX12 is a medium longthrow mid/high frequency cabinet with a coaxial design. The recommended frequency is 140Hz, 18dB/oct. Voice Coil Tracking Projection protects all transducers against thermal overload; the power-reducing circuit simulates the thermal behaviour of the transducers' voice coils.

www.dynacord.com

EAW's JFL210 compact line array module is a light-weight, mobile package employing constant-curvature line array design principles. The array, which can be flown or ground stacked, is aimed at small and medium-scale applications. Two 10-inch woofers deliver tight low-frequency performance, while the 3-inch compression driver is closely matched with a horn, providing precise directivity. These components contribute to a maximum peak output of over 130dB SPL.

www.eaw.com

HK Audio claims that the ConTour Array 'bridges the gap between conventional PA systems and large touring line arrays.' To this end, the array targets itself at local rental companies and touring bands by providing a lightweight, scalable solution. A DualCurve rigging system enables the array to be tilted at 0 or 9 degrees, for long-throw and near-field applications respectively. The system comprises the CTA 208 and CTA 118 SUB.

www.hkaudio.com

JBL Professional's enhanced Vertec series of line array modules feature the company's latest generation of high-powered, lightweight transducers. The full-range, high-directivity VT4887A offers improved acoustical performance, and higher output capabilities with an extended low-frequency response of 55Hz via the new 2268J-1 eight-inch woofer, rising up to 22kHz – 10dB). It is ideally suited as a down fill element in multi-box arrays made of larger Vertec models.

www.jblpro.com

L-Acoustics is field testing a sequel to the V-DOSC line array. The new system for extra large audiences is officially known as the K-1 Project, and combines K-1 components with KUDO. During an interview at Frankfurt Pro Light and Sound, L-Acoustics' Director of Marketing Stéphane Ecalle commented that, "The arena market segment will be the overlapping area for both systems [K-1 and V-DOSC] where they will operate seamlessly."

www.l-acoustics.com

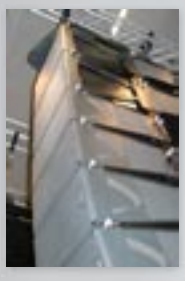
Martin Audio's Omniline is a scalable micro line array, configurable in multiples of four modules, to a maximum of 32. It employs small, direct radiators as opposed to compression drivers, to produce high frequencies. However, the system maintains a high output potential because each module contains five HF devices; resulting in an effective HF voice coil diameter of 3-inches.

www.martin-audio.com

Meyer Sound's Milo is a compact, four-way curvilinear array, delivering 140dB SPL peak output. The system is loaded with three very-high frequency transducers, extending its operating range to 18kHz as well as increasing the available high frequency headroom, and high resolution of delicate transients in long-throw applications. MILO can also serve as the keystone component in scalable, building block systems comprising combinations of M Series products.

www.meyersound.com

Nexo's GEO D is a three-way vertical array module, loaded with two 8-inch side-firing active transducers, and one 12-inch transducer. The module's vertical MH/HF pattern control is array dependant, while its horizontal M/HF coverage is configurable to 80 or 120 degrees. This setup results in a 105 dB SPL MF/HF output, in conjunction with its twin 8-inch loudspeakers via the EtherSound-enabled NX242 controller.



www.nexo-sa.com

Outline's Butterfly array is geometrically designed to optimise all of the operating parameters of a vertical line array, to achieve acoustic results through mechanical means. The system includes the Hi-pack C.D.H. 483 bi-amplified, three-way cabinet, comprising two forward-facing 8-inch cone transducers with phase diffusers, plus two further 8-inch cone drivers placed behind them, radiating at right angles.

www.outlinearray.com

QSC Audio Products' bi- or tri-amp mode-operable Wideline WL2082-I Installation Line Array element uses a pair of high-power neodymium magnets, 8-inch LF drivers, a pair of 1.75-inch diameter voice-cil neodymium compression drivers with titanium domes mounted on a multiple aperture diffraction waveguide to provide 140° coverage.

www.qscaudio.com

RCF's TT+ High Definition Touring and Theatre System includes the TTL33-A line array module, 750W midrange, and 250W drivers. The TTL33-A module features 96kHz/24-bit, floating point DSP. Two neodymium, 8-inch drivers in a band-pass loading configuration provide tight and loud mid-bass, while a horn-loaded 8-inch driver handles the midrange frequencies. The system produces a maximum peak output of over 130dB SPL.

www.rcfaudio.com

Renkus-Heinz's Versys VLX3 demonstrates an impressive output to weight ratio. It weighs in at under 190lbs, and delivers over 133dB peak SPL. The VLX3 is useable in small ground stack arrays or 20-module tall flown rigs, and enclosures can be ordered with 60, 90, or 120° horizontal patterns. VLX3 users will have the option of upgrading to the self-powered RHAON enabled VL3 version in the future.

www.renkus-heinz.com

SLS Loudspeakers employs the latest planar ribbon driver technology in its Ribbon Line Array Series of line array systems. The LS9900 is the flagship full-range, tri-amped true line source array module, designed primarily for large venues requiring high-fidelity sound reinforcement. Two versions are offered: the LS9900 for permanent installation, and the LS9900T for touring applications. Both models feature two HF proprietary PRD1000 transducers.

www.slsloudspeakers.com

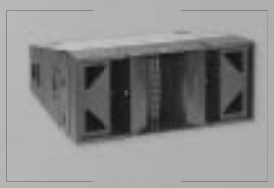
Sound Projects' Linex is a vertical line array module boasting impressive low-end performance, allowing subs to remain ground stacked without losing coherence. Each module is loaded with two custom designed 6.5-inch MF drivers, mounted behind narrow, rectangular diffraction slots. Two 12-inch woofers are mounted side-firing in the enclosure, emulating a single, symmetrical low frequency source. The system is not self-powered.

www.soundprojects.com

Stage Accompany's Audience AH36 System comprises three parts; the AB 36 sub, ARH 802 Amplifier-rack, and the all-new AH 36. The AH 36 is a three-way, ribbon-loaded LMF/MF/HF cabinet with a horizontal dispersion of 36°, and a vertical dispersion of 30°. It features two wave-guided Ribbon Compact drivers, two SA 0802 8-inch drivers, and two SA1206 12-inch low midrange drivers.

www.stageaccompany.com

Turbosound prides itself on the adaptability of its Flex Array to a wide range of venue types. Flex Array is a medium-scale system, combining elements of line array theory with virtual point source technology. The system is fully arrayable, with fly-gear integrated into the box for rapid setup. The horn-loaded low frequency cabinet utilises an 18-inch neodymium drive unit.



www.turbosound.com

THE EX-FACTOR

Extreme: Live At The Corn Exchange

90's funk-metallers Extreme have been the subject of significant internet-based hype lately, attracting a wide spectrum of supporters to their current *Take Us Alive* tour dates. DAVID MACKENZIE goes backstage to find the secrets of their recent success.

Twelve years on since their last live tour, 90's funk-metallers Extreme are out to prove that they've still got it. Original band-members Gary Cherone, Nuno Bettencourt, and Pat Badger have reunited, along with newcomer Kevin Figueiredo, for the *Take Us Alive* world tour, coinciding with the release of the band's new studio album, *Saudades de Rock*, released earlier this year.

Although it's been a while since the entire group has performed together, they have gone on to participate separately in other high-profile projects. Cherone spent three years as lead vocalist for Van Halen, whilst Nuno Bettencourt has had mixed solo success, and maintained a reputation as one of the world's guitar heroes.

I caught up with Front Of House Engineer Joe Brown, and Monitor Engineer Jay Phebus, before their show on November 11, at the Cambridge Corn Exchange, to discover what lay behind the rifftastic sound of Extreme's recent success.

The Setup

The setup for the evening found Monitor Engineer Jay Phebus on an iLive 80, and FOH Engineer Joe Brown on an iLive 112. They used an analogue split on the audio leaving the stage, leading to a dedicated iDR-10 stage box for each control surface, giving them total freedom to get on with their own thing.

Looking around Brown's FOH booth, I was surprised to find a total lack of outboard. It turned out that the show was entirely dependant on the internal effects of the iLive 112. The guys insisted that it was totally capable.

"It's so much better than all of the racks full of marginal crap that you have to deal with in this profession," insisted Phebus. "I can't even begin to tell you how much of a relief that is." He makes a good argument; every input has a gate, parametric EQ, compressor, limiter, and delay. However, some might find the digital-minimalist approach a little soulless – the only judgement I can make is that the show sounded great.

Technician Tetris

While they may still have some convincing to do before they win over the most die-hard of analogue junkies, the benefits in terms of space reduction are undeniable. During Extreme's current Take Us Alive World Tour, the pair have set up in a wide range of venues, from large theatres to small clubs. For the club dates, the small footprint of the consoles has been a major advantage.

"It can fit into places that no other consoles can fit into," explained Phebus. "Especially when you factor in all of the dynamics. I mean, where in the world would you put all the processing racks? It just wouldn't happen. I set up the other night in a little DJ booth in Belfast. It was so small; I was literally in a 6-foot wide, 4-foot deep barrier, which most consoles wouldn't even fit in, and I had both the stage boxes. I sat on one for the whole show while mixing on the console." ▸

"Oh Boy"

Phebus explained that each iDR-10 stage box houses an iDR-64 DSP module: "the entire brain of the system". The decision to house the DSP in a stage box, away from the control surface, may seem like Allen & Heath is asking for latency trouble, but Jay insists that it's not a problem. He did concede that "there was a slight bit, three software versions ago. But every time the software upgrades, any slight issues that we've had have been addressed."

This is really a minor factor in the scheme of things for Phebus, who is adamant about the major progress made by the company in recent years. He's been using the iLive systems for a year and a half, mixing front of house for Joe Bonamassa and King's X, and he's quick to sing the praises of Allen and Heath. According to Jay, the company has made 'a quantum leap', to become 'the neighbour of Midas' – a huge compliment for any company in the field.

A catalyst for this change seems to be the improved pre-amps that Allen & Heath has incorporated. Phebus believes that digital-sceptics are put-off by the harsh pre-amps of some consoles. This is just one of the factors that Phebus and Brown say makes the iLive a digital console for analogue engineers.

Phebus tells people all the time, "If you can't mix on the iLive, you're not a qualified analogue engineer." He says that this is because the dynamics are set up to appear as they would with an analogue console, thereby cutting the learning curve, and removing the intimidation of complex menus. "So far we've had a different engineer every night," commented Brown. "And once they're rocking, they're rocking. I give them two songs and they're good."

Apply Within

The importance of this gentle learning curve was apparent during sound check for the evening's supporting acts. These groups had limited personnel, leaving the core staff to pick up the slack in preparation for the show. This staff shortage meant that the opening acts had to mix FOH and monitors from the same surface. Given that particularly compact models had been selected for the tour, this meant that the opening bands had to flip layers to mix monitors.

All of this is an unnecessary added headache for the team. "You never shower and never eat if you work for three bands and get paid by one," commented Jay. Although this situation presented extra challenges on the night, it did not compromise the professionalism of the team, who worked stoically to ensure that each act's sound was perfect.

Leading From The Front

Extreme's lead guitarist, Nuno Bettencourt, is heavily involved with the band's sound production. Not only did he produce their new album, Saudades de Rock, but he is also a major influence over the on-stage sound of the band. He and FOH Engineer Joe Brown have worked together for many years, and collaborate extensively to achieve their sound. "Nuno takes pride in what the fans hear," said Brown. "And not only that, but he's an engineer, and he's used to working on the best stuff… There've been times when we've opened the doors late, just because things don't sound the way he wants… He knows his fans have paid good money."

Nuno was around right up until the doors opened. During this time, he mentioned that they were trialling new vocal mics that night, replacing the usual Shure SM58s. The new mics were from the Sontronics STC range, a make that had only recently become known to the engineers.

"We were rehearsing in Portugal, and the studio we were out with pretty much supplied us with these," Brown explained. "The engineer recommended we try them on the vocals, and they work great." Several shows later, the STC-80s are still in use on backing vocals.

Album Concerns

With any reunion tour, there's always a danger of an audience rejecting new material. Given the age range of the audience on the night, and the fact that it had been twelve years since Extreme's last live tour, a large proportion of the audience were unavoidably accustomed to the studio albums. I wanted to know if FOH was being mixed accordingly.

"In my twenty-plus years of doing this, good bands will always sound better live than they can ever get in a studio", says Phebus, "It's more of a challenge to try to get the record to sound as good as they are live. So if the audience think that a show doesn't sound like a record, typically it's because it sounds better than the record."

"This is a live band", adds Brown, "These guys always make great records, but to really catch these guys live – there's no programming, there's no auto-tune, [impressive, considering Cherone's vocal range] there's nothing. Actually, we've been accused many times of running tapes. None of that's going on, it's all whatever's on stage… I might be a little biased, but Extreme are definitely one of the best live bands there are." – And having seen their show, I could even be tempted to agree. AM

Angela Brown on +44 (0)1480 461555 E-mail: a.brown@audiomedia.com

SERVICES

AES PRO AUDIO

THE 'VINTAGE' NEVE SPECIALIST!

WANTED!

OLD NEVE CONSOLES (IN ANY CONDITION) & SSL CONSOLES

WE PURCHASE WORLDWIDE

AES PRO AUDIO IS A UNITED KINGDOM COMPANY

TEL: 01932 872672 FAX: 01932 874364 TEL INT. 44 1932 872672 FAX INT. 44 1932 874364

email: aesaudio@intonet.co.uk www.aesproaudio.com

1000 CDs with Booklet+Inlay c.£600
Quality CDR / DVD copies from 51p
CD/CD-ROM Mastering £70ph
DVD, CD-audio, CD-ROM, Cassettes

Excellent!

Over 21 years experience
Graphic design, colour print
Large and small run specialists
Excellent quality and presentation

RPM

Repeat Performance Multimedia

6 Grand Union Centre
West Row
London W10 5AS
Tel. 020 8960 7222

visit us at www.repeat-performance.co.uk

THEAR TECHNOLOGY LIMITED

THE MANUFACTURERS APPOINTED PROFESSIONAL AUDIO SERVICE CENTRE

SONY Professional DAT, PCM, M/Disc · OTARI MTR to DTR · AKAI DIGITAL
TASCAM DAT, DA88 · FAIRLIGHT · REVOX · MRL Test Tapes · ATHAN

Product Dedicated Specialists
Meticulous Estimating
Rapid Response Turnaround

Collection and Delivery
On Site or In House Service
Comprehensive Warranties

Trading 10 Years. The Initiators of "Service Only" Contracts to Pro Audio Manufacturers

USE THE APPOINTED SERVICE COMPANY, WE HAVE THE TRAINING, THE PARTS, THE NECESSARY JIGS, THE MANUFACTURERS AGREEMENT, THE KNOWLEDGE.

TTL House, Sheeptick End, Near Lidlington, Bedfordshire, MK43 0SF
Telephone 01525 841999 Facsimile 01525 841009

The largest collection of serious recording tools in the UK

KMR AUDIO

www.kmraudio.com
020 8445 2446 • sales@kmraudio.com
1375 Whetstone High Rd, London, N20 9LN

MANLEY · api · digidesign PRO TOOLS HD · Neve · Solid State Logic SOUND | | VISION · CRANE SONG

STUDIO ACOUSTICS

AIR CONDITIONING

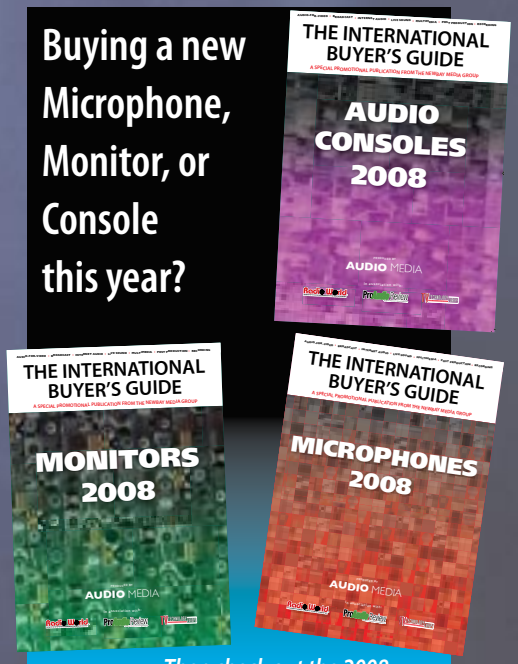
AIR CONDITIONING & VENTILATION TO SOUND STUDIOS IS OUR SPECIALITY

WE PROVIDE DESIGN ONLY OR DESIGN AND INSTALLATION FOR MANY WELL KNOWN CLIENTS.

WHETHER IT BE FOR DISPLACEMENT, FREE COOLING, V.A.V., V.R.V., SPLIT, UNITARY OR CENTRALISED CALL **MIKE HARDY** OF **AMBTHAIR SERVICES LTD ON 01403 250306 OR FAX 01403 211269**

WEB: www.ambthair.com
Email: cool@ambthair.com

Buying a new Microphone, Monitor, or Console this year?



Then check out the 2008 International Buyer's Guides at www.audiomedia.com

Angela Brown on +44 (0)1480 461555 E-mail: a.brown@audiomedia.com

SERVICES

PROTOOLS
101, 110, 201,210M,210P,310M,310P
ICON, 5.1 & BESPOKE TRAINING
Alchemea have updated their post training facility to emulate a fully specified modern dubbing theatre. From February 2007 Alchemea will be offering a professional bespoke training and consultancy service. This will include Digidesign's ICON D-Control™ course as well as 5.1 mixing training.
Recent clients include BBC, ITV Carlton,Videosonics & BSkyB.
Contact Mike Sinnett for more info
ALCHEMEA
college of audio engineering
digidesign
e: info@alchemea.com
t: +44 (0)20 7359 3866

FOR ALL YOUR RECORDING NEEDS

AMPEX – BASF – MAXELL – JVC
AUTHORISED NATIONAL DISTRIBUTOR
Spools, boxes, blades, splicing and leader tape.
Custom wound cassettes C1-120, labels, library cases, cards.
Bulk audio C-Os, cases, pancake. Broadcast cartridges.

SVS SOUND & VIDEO SERVICES

Shentonfield Road, Sharston Industrial Estate,
Manchester M22 4RW Tel 0161 491 6660
FOR QUALITY, PRICE AND SERVICE

Renew Your *Audio Media* Subscription for 2009!

Complete this form and fax to +44(0)1480 461550

To qualify for your free subscription you must complete all the questions below:

1 JOB FUNCTION *(please circle)*

A Managing Director/owner/corporate Management
B Studio/facility Manager
C Producer/director
D Chief Engineer
E Independent/freelance Engineer
F Engineer/technician
G Sound Design/editor/mixer
H Operations/production Manager
I Consultant
J Sales/marketing/admin
K Artist/musician
L Studio Designer
M Trainee Audio/Video Professional
N Other

2 TYPE OF BUSINESS *(please circle)*

A Commercial Recording Studio
B Project/private Studio
C Audio/video/film Post Production
D Audio/video/film Production
E Broadcast Production
F Tv Station
G Radio Station
H Live Sound Production
I Contractor/installation
J Venue/auditorium
K Remote Truck/location Recording
L Mastering/replication/duplication
M Rental/hire
N Acoustics/facility Design
O Multi-media/internet Web Creation
P Record Production Company
Q Corporate/government/telecomm
R Dealer/distributor/retailer
S Manufacturer
T Education/training Facility
U Media/industry Association
V Other

3 FIELD OF WORK *(please circle)*

A Audio Only
B Visual Only
C Audio and Visual

4 PURCHASING AUTHORITY *(please circle)*

A Authorise
B Specify/recommend
C End user only/none

5 PURCHASE INTENTIONS, 2008–9 *(circle all that apply)*

A Microphones
B Processors/Plug-ins
C DAW Technology
D Recorders
E Monitors/Amps
F Sound Reinforcement
G Pro Video Technology
H Consoles

Name.....
Job Title.....
Company.....
Address.....
Town / City.....
County / State.....
Country.....
Post Code / Zip.....
Tel ..... Fax .....
e-mail ..... @.....
Would you like to receive the Digital Edition? (please circle) **YES/NO**

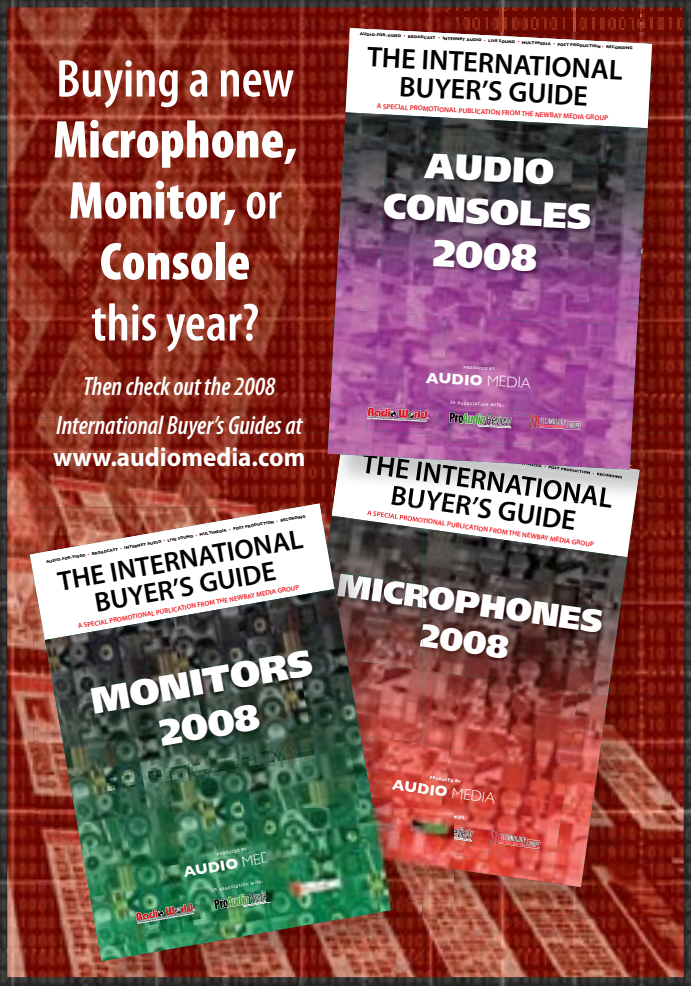
IMPORTANT:
Sign here if you wish to receive **AUDIO** MEDIA

Signed..... Date.....

This application is not valid unless **every** section is completed and it is signed and dated. If you do not qualify to receive AUDIO MEDIA without charge, it is available by subscription at:
£43 UK, £60 Europe, £75 Rest of World.

Once you have completed this form please return to IMAS Publishing (UK) Ltd. You may fax back to us on: +44 (0)1480 461550, mail it to us at Audio Media, Imas Publishing (UK) Ltd, Subscription Dept., 1st Floor, 1 Cabot House, Compass Point Business Park, St Ives, Cambs PE27 5JL United Kingdom, or visit www.audiomedia.com/subscribe.html and fill out a subscription form for Audio Media.
Incomplete forms will not be processed. This information is used for IMAS subscription purposes only.

The Publisher offers free subscriptions on a limited basis to those who meet publisher's definition of qualifications and reserves the right to not serve or discontinue free subscriptions at any time.


Buying a new Microphone, Monitor, or Console this year?
Then check out the 2008 International Buyer's Guides at www.audiomedia.com
THE INTERNATIONAL BUYER'S GUIDE
AUDIO CONSOLES 2008
THE INTERNATIONAL BUYER'S GUIDE
MICROPHONES 2008
THE INTERNATIONAL BUYER'S GUIDE
MONITORS 2008

ADVERTISERS INDEX

Audio Precision	11
Benchmark	40
Berliner	53
DiGiCo	60
DPA	29
Euphonix	33
Fairlight	10
FAR	74
Focusrite	47
Fostex	39
Genelec	76
Glyph	16
Harman	48-49
IBS	59, 74
KRK	55
McDSP	15
Merging	19
Millennia	51
Neumann	23
Prism	65
Richmond	74
RME Synthax	12-13
Sadie	75
SCV London	37
Sennheiser	18
Smart AV	6-7
Sommer Cable	67
Sonic Distribution	2-3, 21, 50, 66
Sonnox	20
Tascam	31
TL Audio	30
TC Electronic	17
Ultrasone	22
Unity	57
Zaxcom	32

Quiet interiors just got quieter
The OSIX Suspensions
Vastly reduce handling noise, are very light, have smaller shadows and need less headroom
RICHMOND FILM SERVICES

LRX2 audio workstation

location recorder

Record... Where you want, when you want

The SADiE LRX2 is the most flexible location recorder available, meeting the demands of the modern recording environment. This feature-rich, compact unit provides the ultimate solution for increasing the productivity of the time-conscious professional.

- Up to 48 tracks of AES/line/phantom powered mic inputs or 64 channels MADI I/O
- Mirrored recording for secure back up
- User intuitive software for instant multi track recording
- Stereo mix creation during recording
- Redbook CD burning on location
- BWAV recording format for instant transfer into your system
- Waveforms drawn whilst recording and no rendering
- Edit whilst recording to ensure fast turnaround of product

SADiE

A Prism Sound Company

Contact us now to arrange your demo:

Email: sales@sadie.com

www.sadie.com

+44 (0)1223 424988 +1-973-983-9577

series 5

Light **Metal**

No other tool in the professional recording chain has more stringent requirements than the audio monitor – it is the last piece of an often complicated chain of events. At Genelec our goal is to deliver these sound experiences to you as they are intended by the original performer. Genelec active monitoring technologies, including our die-cast aluminum enclosure, offer you an undistorted, dynamic and natural sound without adding or removing anything from the electronic signal. No matter how heavy your recording sessions are, discover the Genelec system that suits your needs at **www.genelec.com**

8000-Series features

Active Crossovers
Dedicated Amplifiers for Each Driver
MDE™ - Minimum Diffraction Enclosure
DCW™ - Directivity Control Waveguide
Drive Unit Protection Circuitry
Room Response Controls
Iso-Pod™ - Isolation Positioner/Decoupler™
High Performance Reflex Port

GENELEC®